Supreme Court, U.S.
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In The

Supreme Court of the United States

October Term, 1996

TEMPO, INC., d/b/a TEMPO WEST, INC.,

Petitioner,

vs.

TOGO D. WEST, JR., Secretary of the Army,

Respondent.

On Petition for a Writ of Certiorari to the Federal Circuit Court of Appeals

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED FOR REVIEW

This Petition raises the following questions:

1. Should judicial admissions be disregarded under *de novo* review?

2. Has the Federal Circuit failed to follow this Court's precedent in *Kelley v. Everglades Drainage District*?

3. Has the *Spearin* doctrine been misapplied?

4. Have basic rules of contract interpretation been frustrated?

PARTIES TO THE PROCEEDING

United States Department of the Army, Togo D. West, Jr., Secretary of the Army.

RULE 29.6 LISTING

Pursuant to Rule 29.6, Petitioner Tempo, Inc., d/b/a Tempo West, Inc., is a private corporation registered in the State of Michigan with no parents or subsidiaries.

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Petitioner, Tempo, Inc., d/b/a Tempo West, Inc., ("Tempo" or "Petitioner") respectfully petitions for a Writ of Certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit ("Federal Circuit").

OPINION BELOW

The Opinion of the Armed Services Board of Contract Appeals, containing its Findings of Fact, is reported and reprinted in Appendix A. The Federal Circuit affirmed such Judgment without opinion on February 6, 1997, reprinted in Appendix B. Petition for Rehearing was filed on March 19, 1997, and the Federal Circuit denied same on June 5, 1997, reprinted in Appendix C.

STATEMENT OF JURISDICTION

The Federal Circuit judgment without opinion was rendered on February 6, 1997. The Federal Circuit denied the Petition for Rehearing on June 5, 1997. This Court's jurisdiction is invoked under 28 U.S.C. § 1254(1).

REASONS PRESENTED FOR REVIEW

The Contract Disputes Act (CDA), 41 U.S.C. § 601 *et seq.*, was enacted by Congress to implement the principles under which government contracts were to be administered and to protect the rights of the Contractor whose claims were denied. While the CDA has been the subject of much litigation since its enactment in 1978, the Supreme Court has seldom expressed its guidance on matters of significant impact to the contractors presenting claims under the terms of the CDA. The instant Petition for a Writ of Certiorari provides this Court with the opportunity to set forth such guidance which is needed in order to address the extent to which the *de novo* power of review

permits an agency's Board of Contract Appeals to disregard factual admissions made by the agency in pleadings and modifications to the contract and to ignore the parties' contemporaneous interpretation during the actual performance period in determining the parties' intent. The *Wilner* decision, 24 F.3d 1397 (Fed. Cir. 1994), on which Certiorari was denied, overruled long standing precedent governing government contract law by holding that a Contracting Officer's Final Decision is not binding and no presumption arises that such a decision is correct. However, this Court has not ruled on the materially different issue, as presented in the instant case, of whether judicial admissions contained in a pleading issued by the agency may be disregarded and accorded no weight by the agency's Board of Contract Appeals ("agency board"). Petitioner believes the Federal Circuit's ruling conflicts with its own decision in *E.C. McAfee A/C Bristol Metal Industries of Canada Ltd. v. United States*, 832 F.2d 155 (Fed. Cir. 1987).

Similarly, this Court has not considered the issue of how far a Court of Appeals may go in affirming an agency board's Findings of Fact not stated in sufficient detail to indicate the factual basis for the ultimate conclusion reached by the agency board. Petitioner believes the Federal Circuit's ruling conflicts with this Court's decision in *Kelley v. Everglades Drainage District*, 319 U.S. 415, 63 S. Ct. 1141 (1943).

This Court's decision in *United States v. Spearin*, 248 U.S. 132, 39 S. Ct. 59, 63 L. Ed. 166 (1918), has been totally disregarded by the Federal Circuit, and this Court should grant Certiorari to re-enforce the Spearin doctrine and to confirm its present-day vitality and application.

Finally, this Court should grant Certiorari to recognize that the rules of contract interpretation remain effective limits upon the power of *de novo* review. Petitioner believes that the Federal

Circuit ruling conflicts with its own decision in *Blinderman Construction Co. v. United States*, 695 F.2d 552 (Fed. Cir. 1982) holding that the parties' interpretation during performance is to be afforded great weight in determining intent.

De novo review is a power granted to the agency boards with the expectation that such *de novo* review will be reasonably exercised in view of the content of the pleadings and the proof submitted before it. It is unfortunate that the Federal Circuit confused the rule that admissions may be relied upon in meeting the burden of proof with its interpretation that the power of *de novo* review somehow relieves a party of such admissions.

Violations of the *de novo* power are readily apparent from even a cursory review of the agency board's decision which was affirmed without opinion by the Federal Circuit. These violations include the agency board ignoring judicial admissions in the agency's Answer and admissions in the modifications ("Mods"), the agency board failing to set forth Findings of Fact in sufficient detail to justify the ultimate conclusion reached, the agency board incorrectly applying the Spearin doctrine, and the agency board acting contrary to the rules of contract interpretation. Substantial prejudice has resulted to Petitioner because of these violations. *Certiorari* should be granted to review and correct these violations. The four questions presented are:

1. Should judicial admissions be disregarded under *de novo* review?

2. Has the Federal Circuit failed to follow the precedent in *Kelley v. Everglades Drainage District*?

3. Has the *Spearin* doctrine been misapplied?

4. Have basic rules of contract interpretation been frustrated?

STATEMENT OF THE CASE

Petitioner, Tempo, Inc., d/b/a Tempo West, Inc., a small business contractor, was awarded two SBA set-aside contracts by the Department of the Army ("Respondent") to construct barracks and related facilities at Ft. Bragg, NC. The first contract, No. DACA 21-84-C-0060 (84/60 contract) in the amount of $7,162,000, was awarded on May 25, 1984, and the second contract, No. DACA 21-85-C-0085 (85/85 contract) in the amount of $13,349,000, was awarded on September 26, 1985. Petitioner filed Requests for Equitable Adjustments (REAs) on both contracts based on defective and deficient plans and specifications, erroneous contract interpretations, differing site conditions, extra work, and government-caused delays and disruptions to the completion date. Ultimately, when the parties could not resolve the REAs, Petitioner presented its claims to the Contracting Officer for Final Decision. On November 26, 1986, Petitioner requested a Contracting Officer's Final Decision for $6,241,765.18, and a 386 calendar-day time extension on the 84/60 contract. On January 20, 1988, Petitioner requested a Contracting Officer's Final Decision for $2,628,953.01 and a 189 calendar-day time extension on the 85/85 contract. The Contracting Officer denied most of Petitioner's claims, and Petitioner took Appeals to the agency board with the power of *de novo* review under 41 U.S.C. § 609(a)(3).

The agency board consolidated the two Appeals for hearing purposes with the hearing to cover entitlement only. The agency board heard no evidence on Quantum, or the amount of damages. The agency board decided liability and calendar-day delay issues only.

On the 84/60 contract Petitioner presented seven claims of which the agency board granted entitlement on two claims and denied claims on: (1) differing site conditions caused by a false

(perched) water table; (2) directed changes to wardrobes; (3) constructive changes to concrete topping; (4) multiple coats of textured ceiling paint; and (5) delays to the completion date.

On the 85/85 contract, three of Petitioner's claims for: (1) masonry reinforcement, (2) pre-cast plank penetration; and (3) delays to the completion date were denied by the agency board.

Since Petitioner's application for a Writ of Certiorari states similar grounds of error which pertain to claims on both contracts, Petitioner has not discussed each contract separately but has addressed together the claims on both contracts under the similar grounds of error as set forth in its Reasons to Grant Certiorari. For ease of reference, Petitioner has identified in its Statement of the Case under which Reason to Grant Certiorari the denied claims fall.

Reason I — The Federal Circuit ignored Judicial Admissions by Respondent — will address claim (4) multiple coats of textured ceiling paint on the 84/60 contract.

Reason II — The Federal Circuit incorrectly applied the Spearin doctrine — will address claim (4) multiple coats of textured ceiling paint on the 84/60 contract and claim (2) pre-cast plank penetrations on the 85/85 contract.

Reason III — The Federal Circuit erred by affirming a decision lacking sufficient factual detail to support the ultimate conclusion reached — will address claim (5) delays to the completion on the 84/60 contract and claim (3) delays to the completion date on the 85/85 contract.

Reason IV — The Federal Circuit erred regarding rules of contract interpretation — will address all other claims under both contracts.

Subsequently, an Appeal was taken to the Federal Circuit of Appeals by Petitioner. On February 6, 1997, the Federal Circuit of Appeals affirmed the agency board's decision, and on March 19, 1997, Petitioner filed a Petitioner for Rehearing and Suggestion for Rehearing En Banc which was denied on June 5, 1997, by the Federal Circuit.

A Petition for Writ of Certiorari is timely filed with this Court within 90 days.

REASONS FOR GRANTING THE WRIT

I.

THE COURT OF APPEALS FOR THE FEDERAL CIRCUIT HAS IGNORED JUDICIAL ADMISSIONS BY RESPONDENT.

This Court should grant Certiorari because the Federal Court has entered a decision in conflict with its own decision in *E.C. McAfee A/C Bristol Metal Industries of Canada, Ltd. v. United States*, 832 F.2d 152, 155 (Fed. Cir. 1987), as to call for an exercise of this Court's supervisory powers.

The 84/60 contract requires that the interior concrete ceilings of the barracks shall be painted with one coat of paint identified as TT-C-555B (38a). The Painting Schedule states "none" with regard to a second or third coat of paint. Of the 21 different types of paint application described in the Painting Schedule, the textured ceiling paint was the *only* exception which required *one* coat of paint.

Petitioner purchased the required paint from Fuller O'Brien which certified that its paint met the Federal Specification for TT-C-555B. This certification identifying the paint as "latex

texture paint" was sent to the Army. Petitioner began painting the barracks ceilings in mid-August 1985. Respondent immediately declared the painted ceilings unacceptable due to insufficient hiding. Also, Respondent notified Petitioner that the paint sample submitted as TT-C-555B failed to comply with the specifications after being tested by the Respondent's laboratory. Work was suspended until new paint could be obtained. Petitioner assumed the Respondent's test was accurate and took immediate steps to obtain a different latex paint from M.A. Bruder Co., a/k/a Muralo, another of the largest paint suppliers in the United States. Painting resumed on December 4, 1985, and the Respondent again found the ceiling unacceptable.

On or about January 15, 1986, Petitioner was given notice its second paint manufactured by Muralo had failed the test for compliance, and the painting work was stopped again. Petitioner was informed by its paint supplier that the test performed by the Respondent's laboratory could not be accurate. Petitioner proceeded to have the paint tested by the manufacturer and by an independent laboratory. In both cases, the paint met the specifications. Respondent had been using a method of testing appropriate only for oil-based paint, not the latex paint which was twice submitted. Subsequently, the Respondent's testing laboratory discovered that a critical portion of the prescribed paint test procedure was not followed, which resulted in the discrepancy in test results. Despite this information, and additional confirming information from another independent laboratory, that the paint test results indicated compliance, Respondent still directed Petitioner to obtain an oil-based paint purchased from the Stabler Co. and to resume painting the ceilings. Petitioner re-painted all of the buildings with Stabler paint.

On March 19, 986, the Contracting Officer accepted the Muralo latex paint as compliant with the specifications. On

March 28, 1986, after all ceilings had been painted, the Contracting Officer directed Petitioner to apply additional coats of paint to ceilings designated by the Area Engineer. Petitioner advised the Respondent that repainting would commence using the Muralo latex paint it had been using, prior to the second suspension of paint work, and the Respondent did not object. Petitioner was subsequently directed to use the Stabler oil based paint to repaint ceilings in 149 of 168 dwelling units, 8 of 9 hallways, and 5 of 6 stairwells. Petitioner proceeded to repaint the ceilings, as directed by the Contracting Officer, and completed the painting in approximately October 1986, which resulted in repainting of almost all of the ceilings.

On September 28, 1988, two years after the painting was completed, the Respondent unilaterally issued Mod 34 which granted Petitioner a price increase of $45,162.19 and an extension of 58 calendar days, due to the suspension of work between January 29, 1986 and March 19, 1986, which coincides with the period between the notice of the second paint failure and the subsequent finding that the paint was acceptable. This itself constitutes an admission that the Respondent improperly tested the latex-based paint. Some two months before the hearing in 1992, Mod 39 was issued rescinding Mod 34 on the basis that the erroneous testing did not delay the project. Mod 39 did not withdraw or even mention the Respondent's finding that its paint test was faulty or that the repainting constituted a constructive change to the contract, as Mod 34 stated.

Moreover, in its Complaint, Petitioner alleged that paint testing was in error and the paint as originally submitted conformed to the specifications. In its Answer to the Complaint, the Respondent specifically admitted that the latex paint testing was in error and the textured ceiling paint conformed with the specifications. Similarly, in its Pre-Trial proposed Findings of Fact, Respondent admitted in four of the proposed Findings of Fact that it erroneously tested the paint.

The agency board found that the Painting Schedule was defective in specifying only one coat of paint to achieve complete hiding (59a, 61a). Yet, inexplicably, the agency board ruled that the Fuller O'Brien and Muralo latex paints were properly rejected and thus additional coats were applied by Petitioner at its own risk. The agency board concluded that Petitioner bore the risk of the possibility that the Stabler oil-based paint would not achieve complete hiding. The agency board findings are in conflict with admissions made and binding upon Respondent. Petitioner would never have applied the Stabler oil-based paint if the Respondent's tests had not erroneously indicated that Petitioner's initially submitted latex based paint was not compliant.

The Federal Circuit has addressed the very issue presented in the instant case in *E.C. McAfee A/C Bristol Metal Industries of Canada, Ltd. v. United States*, *supra.* In that case, the Federal Circuit held that pleadings are judicial admissions and a party may invoke the language of the pleadings to render the facts contained therein indisputable. (*Ibid,* at p. 155) The unfairest kind of surprise results to a litigant who has relied upon such admissions as establishing undisputed facts when, after the proof is closed, the agency board ignores admission and impermissibly determines the fact contrary to that previously admitted.

Respondent has been permitted to avoid the effect of the admission in its Answer that its paint testing was erroneous. This is in complete contravention of the ruling in *E.C. McAfee.* Respondent rejected ceiling paint submitted and applied by Petitioner. Therefore, the burden to prove noncompliance with the specification rested upon Respondent. *Southwest Welding & Manufacturing Co. v. United States*, 188 Ct. Cl. 925, 412 F.2d 1167, 1176 (Ct. Cl. 1969). To prove that the paint submitted by Petitioner was non-compliant, Respondent contended that the paint did not pass proper tests. But, in its Answer to the

Complaint, Respondent specifically admitted that the latex paint testing was in error and the textured ceiling paint conformed with the specifications. Certiorari should be granted to correct this error.

II.

THE FEDERAL CIRCUIT INCORRECTLY APPLIED THE *SPEARIN* DOCTRINE BY IMPOSING THE BURDEN OF DEFECTIVE SPECIFICATIONS UPON THE PETITIONER AND NOT THE GOVERNMENT.

As stated above, the 84/60 contract required one coat of paint and permitted the Contractor to choose between two alternatives of either latex-based paint or oil-based paint. When the Respondent mistakenly rejected the latex-based paint, Petitioner submitted an oil-based paint. The agency board found, and the Respondent admitted, that the oil-based paint supplied by Petitioner was compliant with the specifications. Then, in direct contradiction to that conclusion, the agency board held and the Federal Circuit affirmed, that the Petitioner bore the risk that the specified one coat of the compliant oil-based paint would not meet the contractual requirement for complete hiding. Such holdings are total inconsistent with this Court's ruling in *United States v. Spearin*, *supra,* which holds the Government to an implied warranty that: (a) if a contractor follows the specifications, then satisfactory performance will result; and (b) the Government bears the risk when specifications furnished by the Government are not suitable for their intended purposes.

Since the Government bears responsibility for its implied warranty that the specifications are accurate, the Petitioner cannot be responsible for the failure of the specified one-coat of paint to achieve complete hiding. Since the specifications provided for more than one alternative (oil or latex paint),

Petitioner had the right to assume that whichever paint it chose would be proper. *Southern Paving Corp.*, 77-2 BCA ¶ 12, 813 (1977) and *S & M-Traylor Brothers, a Joint Venture*, 78-2 BCA ¶ 13495 (1978).

Further compounding its error of assigning to Petitioner the risk that the specified single coat would not achieve complete hiding, the agency board held that Petitioner should be compensated for areas where there were color variations and where patching and grinding necessitated additional coats of paint because "in these circumstances, the painting schedule was defective in calling for merely one coat." (61a). Since the contract requirements did not distinguish between areas but required a single coat of paint in all areas, the agency board has improperly disregarded the basic premise that the paint specification was defective by denying entitlement to compensation for all other areas that required more than one coat.

Another violation of the Spearin doctrine has occurred as a result of the Federal Circuit affirming the agency board's ruling on pre-cast concrete floor plank penetrations on the 85/85 contract.

Contract drawing A-11 showed three 2" openings for mechanical pipes in the span of pre-cast plank. Three separate 2" holes were to be cored in the plank to allow connection of the heating and air conditioning fan coil units (FCUs) between the floors. Petitioner planned to place the plank and then drill the three small pipe holes when the FCUs were ready for installation. After the plank had been installed on the first floor of three of the barracks and Petitioner was preparing to install the FCUs, it was discovered that the installation would require cutting three large round 4" holes, resulting in one very large 4" x 12" hole, or penetration, in the plank. The large opening

required by the FCUs necessarily cut steel reinforcing strands in the plank which resulted in a loss of structural integrity in the plank. Petitioner was directed to install angle brackets for support under the plank in the three buildings which already had planks placed on their first floors. For the remainder of the floors, the strand pattern in the planks was changed to allow for more strands which would allow strands to be cut without affecting the plank's structural integrity.

The problem arose because the drawings failed to indicate that a large opening would be necessary for the FCU piping. As a result of this error, Petitioner had to expend more time and effort to provide the large penetration and to manufacture and install the support brackets. Moreover, the Government directed that work be stopped on plank placement, including FCU installation, until the matter was resolved.

The agency board held that the contract drawings were incorrect in showing 2 inch openings for the FCU piping. (102a). Ignoring the implied warranty under the Spearin doctrine that the Government bears the risk when its specifications are not suitable for their intended purpose, the agency board denied entitlement holding that there is *no evidence* that the 4" openings could not be affected as shown in the drawings, eliminating the single, large 7" x 14" opening made by Tempo. (102a). This holding is totally without foundation because the drawings do not show 4" openings and the Petitioner did not make a 7" x 14" opening but rather three 2" holes adjacent to one another, were shown and a single 4 x 12 opening was actually provided. (100a). Corrective measure would have been necessary in any event because the evidence in the record supports the conclusion that the Petitioner would be unable to make three separate 4" openings *anywhere* in the plank without compromising its strength. The pre-cast planks were 40" wide and contained 12 evenly spaced supporting strands at 3 ½" apart. The structural

strength of the pre-cast plank is compromised when more than one of these strands is cut. Thus, it is clearly impossible that three separate 4 inch holes could be cut without severing at least three strands in the plank. Regardless of whether the Petitioner cut three separate 4" holes together or apart, the planks' structural integrity would be compromised and corrective action would be necessary.

This Court should grant Certiorari to correct the manifest injustice caused by disregarding the *Spearin* doctrine on this issue.

III.

THE FEDERAL CIRCUIT ERRED BY AFFIRMING THE AGENCY BOARD'S DECISION WHICH LACKED SUFFICIENT DETAIL TO INDICATE THE FACTUAL BASIS FOR THE ULTIMATE CONCLUSION REACHED UPON THE PETITIONER'S DELAY CLAIMS ON BOTH CONTRACTS.

Petitioner's REA sought entitlement to 385 days of government-caused delay on the 84/60 contract. Extensive and undisputed evidence established that the painting activity was the primary delay on the critical path. The Federal Circuit affirmed the agency board's denial of the claimed delays on the basis that "there was other, unrelated work . . . for which Tempo was responsible and which was required for completion of the project." (71a). There was no explanation of whether this other, unrelated work was on the critical path nor was there a quantification of the delay days allegedly attributable to these unspecified activities.

This Court has established the test that Findings of Fact must be made in sufficient detail to indicate the factual basis

for the ultimate conclusion reached. *Kelley v. Everglades Drainage District, supra.* In that case, this Court interpreted the requirements of Rule 52(a) of the Federal Rules of Civil Procedure to require Findings in such detail and exactness as the nature of the case permits in order to serve as a sufficient and reasonable factual basis for the ultimate conclusion reached.

Particularly because the issue in dispute pertained to delays on the critical path, at a minimum, the decision should have addressed what that work was, whether the other, unrelated work for which Petitioner was responsible was on the critical path and if so, the duration of such work and whether any concurrent delays existed. These basic facts were critical, from a fairness perspective, because entitlement existed if this work was not on the critical path. *G.M. Shupe, Inc. v. United States*, 5 Cl. Ct. 662 (1984).

Delays on fixed price contracts have a substantial financial impact on a small business construction contractor, such as Petitioner. The contractor must fund labor, material, equipment and home office costs during the extended period and then expend even more costs to recover costs which have already been paid during the delay periods. The contractor is playing "catch up" often to experience the realization in a bankrupting way that extensions of time do not compensate for the additional outlay of costs. Because the stakes are so high, this Court should require strict adherence relating to findings concerning the critical path.

On the 85/85 contract, Petitioner requested that 170 days of liquidated damages be rescinded because the Government was responsible for 284 days of delay associated with six discrete delay issues: (a) suspended Notice to Proceed (NTP), 12 days; (b) delayed start of demolition, 80 days; (c) delayed start of pre-cast work at Buildings B and D, 34 days; (d) extended

duration for load bearing CMU wall at Buildings B and D, 17 days; (e) delayed start of non-load bearing walls at Building D, 102 days; and (f) delays of interior painting at Building D, 39 days.

The Federal Circuit affirmed the agency board's finding that liquidated damages should not be rescinded except for three days of Government-caused delay associated with the suspended NTP.

The Federal Circuit improperly disregarded an important Government admission in Mod 1 relevant to Delay (b) the delayed start of demolition. The Determination and Finding supporting Mod 1 stated:

> The areas specified on the contract drawings for construction debris are filled to capacity and not approved for the type of material to be dumped . . . Demolition and removal of the existing barracks from the construction is a critical activity . . .

Mod 1 changed the debris removal site and directed Petitioner not to start demolition until October 21, 1985. The Government's lack of an available disposal site caused the 80-day delay associated with the delay of demolition.

These Government admissions demonstrate that the Federal Circuit erred in affirming conclusions reached without sufficient factual detail. Certiorari should be granted to correct manifest injustice resulting from the failure to rescind liquidated damages.

The Federal Circuit affirmed the agency board's holding that the Government was not responsible for delays designated (c), (d), (e) and (f) because the agency board denied entitlement on the two underlying issues of joint reinforcement and pre-

cast plank penetrations. Petitioner has demonstrated herein that such entitlement was improperly denied. (*See* Reason IV at pp. 17-20 and Reason II at pp. 11-13).

The Federal Circuit ignored a second material Government admission contained in Mod 38 which compensated Petitioner for providing bond beam continuity, but did not grant time extensions associated with the work. Petitioner contended that bond beam continuity and the joint reinforcement issue caused delays designated as (c), (d) and (e). The Government's admission that a change occurred incident to providing masonry bond beam reinforcement continuity should have caused the Federal Circuit to question the agency board's delay analysis which failed to address the delays equally attributed as arising from the bond beam continuity issue and the joint reinforcement issue. While the joint reinforcement claim was found to be without merit, the remaining issue of masonry bond beam continuity was *admitted* by the Government to be a change and the agency board should have determined if the Government shared responsibility for delays associated with this aspect of the masonry work. *Kelley v. Everglades Drainage District, supra.* The failure to do so improperly resulted in liquidated damages not being rescinded without the Government's admission being considered. Liquidated damages cannot be assessed if the parties share responsibility for delays. *United States v. United Engineering and Contracting Co.*, 234 U.S. 236, 242 (1914).

IV.

THE FEDERAL CIRCUIT ERRED IN APPLICATION OF THE BASIC RULES OF CONTRACT INTERPRETATION REGARDING ISSUES ON BOTH CONTRACTS.

Issues of interpretation of a contract are questions of law freely reviewable by an appellate court. *Fortec Constructors v. United States*, 760 F.2d 1288 (Fed. Cir. 1985). There are several issues on both contracts where the Federal Circuit erred by disregarding the parties' contemporaneous contract interpretation. Similarly, there are other errors involving contract interpretation as well.

A. The Federal Circuit Ignored The Parties' Contemporaneous Interpretation.

Perhaps the most revealing error is found in the agency board's interpretation of identical contract language on both contracts in exactly opposite fashions as to the use of stirrups, or "box ties", to anchor wall intersections. The Federal Circuit has violated one of the fundamental rules of contract interpretation that the interpretation indicated by the parties during performance is to be given great weight in determining intent. *Blinderman Construction Co. v. United States*, *supra*.

As part of the construction of concrete masonry units (CMUs), the masonry specification in both contracts provided that "Intersections shall be anchored by reinforcing bars or stirrups as indicated." Stirrups, also called "box ties" are of rectangular shape and made of reinforcement wire. The Government's design engineer testified that the contract language pertaining to use of "reinforcing bars or stirrups" gave the contractor a choice to use one or the other.

The proof showed that the Government historically under the same specifications used stirrups for the purpose of anchoring intersections of CMUs and the Government permitted Petitioner to use stirrups in the three barracks under the 84/60 contract. Despite the parties' prior course of dealing on the 84/60 contract, the agency board found, and the Federal Circuit affirmed, that the use of stirrups at wall intersections was not allowed under the subject specifications. This ruling was in error for several reasons:

> 1. The contract specifications specifically allowed for use of stirrups at wall intersections;
>
> 2. The prior course of dealing between the parties showed that the Government's interpretation on this issue was the same as Petitioner's.

The affirmed decision turned on the agency board's analysis of the contract requirements for joint reinforcement (§ 14.2). Both the section for anchoring walls and the section pertaining to joint reinforcement address wall intersections. Section 4M2, Paragraph 14.2, "Specifications for Reinforced Hollow Unit Masonry" states that "Intersections shall be anchored by reinforcing bars or stirrups as indicated." Then, Paragraph 14.2.4 "Joint Reinforcement" provides that "Lap reinforcement for at least six inches for deformed longitudinal wires and at least 12 inches for smooth longitudinal wires. Install factory fabricated sections at corners and wall intersections."

The agency board found that the stirrups supplied by Tempo did not meet the configuration requirements of the contract for joint reinforcement and therefore could not be substituted for that material at those locations. The agency board found that

the stirrups were rectangular while "L" and "T" shaped pieces were intended for use at those locations. This "intent" was based upon the testimony of the Government's structural engineer. "L" and "T" shaped pieces are not indicated anywhere in the contract documents. Since unexpressed, uncommunicated intentions of a party are not relevant to the interpretation of a contract, *Corbetta Construction Co. v. United States*, 198 Ct. Cl. 712, 401 F.2d 1330 (1972), the Federal Circuit erred in affirming the agency board's conclusions that the stirrups did not meet the configuration requirements.

Second, the agency board mistakenly found that the stirrups were fabricated with a single crossbar which did meet the requirements for joint reinforcement. (78a). The agency board stated that Paragraphs 8.16.4.1 and 8.16.4.2, relating to single wythe block partition walls and double wythe construction, require that the reinforcement be "ladder, truss or x-brace design." (78a). Paragraph 8.16.4.2., which specifically classifies box ties (another name for stirrups) as part of joint reinforcement, requires cross wires at 16 inches on center. Stirrups were only 14 inches long on this project and thus did not require a cross wire.

Next, the agency board indicates that the 12" length of the stirrup was not sufficient to provide 12" overlap of the horizontal joint reinforcement as stated in Paragraph 14.2.4. (78a). This section of the specifications does not distinguish between overlap in the longitudinal run of the wall versus that required at intersections, nor does the specification define lap or how it is to be measured. The lap requirement relied upon by the agency board actually pertains to splices of ten foot lengths of joint reinforcement placed in the same straight line between two points per Paragraph 8.16.13. The intersection of two walls does not present this condition and thus the cited specification is not applicable to intersections.

The Federal Circuit erred in affirming the agency board's interpretation that stirrups are not permitted at wall intersections because it ignored the contract section where stirrups are specifically identified. The failure to read the contract as a whole renders that section of the specification meaningless. Both of these errors run counter to the basic rules of contract interpretation. *M.A. Mortenson Co. v. United States*, 29 Fed. Cl. 82, 96 (1993).

This Court should grant Certiorari to correct the misapplication of the rules of contract interpretation whereby the use of stirrups at wall intersections is expressly specified and recognized and should be found within the zone of reasonableness under the terms of the contract.

A second instance of the Federal Circuit ignoring the rules of contract interpretation pertains to Petitioner's claim concerning concrete topping.

The 84/60 contract required that the pre-cast plank used for flooring in the barracks be topped or covered with 2" of concrete topping mixture. The specifications also required that "Concrete shall be finished, suitable for the intended purpose, to true plane surfaces within a tolerance of 1/8" in 10' and determined with a ten-foot straightedge." (30a). It is undisputed that tolerance measurement was to be made within 24 to 72 hours after topping placement because compliance with floor tolerances would be more difficult or unachievable after loads were applied. Petitioner measured the floors for compliance with the required tolerance during and as soon as possible after placement. After all floors were placed, the normal scope of minor repairs was completed, and the Government acknowledged floor topping was satisfactory on May 2, 1985. The Government never mentioned nor formally notified Petitioner of any problem with the topping until seven months

later on December 13, 1985 when Petitioner was advised by letter that the floors were "neither level nor smooth" and they were not suitable for installation of floor tile. In its December 13, 1985 letter, the Government directed Petitioner to "level" the floors. Over a six month period, Petitioner did so, incurring substantial costs for labor, materials and equipment to level the floors. The agency board found Petitioner's work on the concrete topping during this six month period was performed on a voluntary basis.

The Federal Circuit ignored extensive admissions in the record showing that the Government directed Petitioner to perform such work contrary to the agency board's own ruling that such inspections and rejections must be made in a timely manner within 24 to 72 hours of the topping placement in order that the floors would reach a "level" standard with a tolerance of 1/8" in 10 feet before the effects of time and application of loads distorted the condition of the floors. The untimely imposition of this requirement was a constructive change.

B. The Federal Circuit Misapplied The Parole Evidence Rule.

The Federal Circuit improperly affirmed the agency board's ruling that no differing site conditions existed, even though Mod 1 was issued to relieve the pressure of water caused by a perched or false water table. Section 2E1 at p. 2E1-3, paragraph 27 of the specifications stated that the water table readings 24 hours after the borings are made are the "true depth of ground water." The soil boring for the location where ground water was encountered on July 12, 1984, CS-7, indicated ground water at 12 ½ to 13 feet below grade. Petitioner encountered ground water at 4 to 4 ½ feet below grade and the water inundated the project site. The Government later issued Mod 1 to address a limited portion of the elevated and false water table missed by the

Government's own soils and design engineers during the Government's original design of the project. How could a reasonable small business contractor anticipate this problem when the Government did not anticipate the existence of a false, or perched, water table? Such a conclusion by the agency board, *i.e.*, the contractor should have reasonably anticipated an area wide perched water table because some subsurface soils at various locations, thicknesses and elevations were partially impervious as displayed by the soil borings, ignores the circumstances showing clearly that the Government's own design engineer did not detect such a false (or perched) water table and that the Government considered perched water a compensable condition by virtue of its issuance of Mod 1 which provided partial relief for false and elevated water tables at some, but not all areas of the site.

Without referring to any of the rules of contract interpretation or when parole evidence may be used, the Federal Circuit affirmed the agency board's ruling that Petitioner's differing site condition claim was barred by accord and satisfaction language in Mods 1 and 6. Parole evidence may only be resorted to if the terms of the Mod are ambiguous. *Sylvania Electric Products, Inc. v. United States*, 198 Ct. Cl. 106, 458 F.2d 994, 1005 (1972).

Mod 1 contains no ambiguity in that its language, which stated:

> This Mod confirms my instructions issued 1 October 1984 wherein you were directed to provide all necessary labor, equipment, materials, tools and incidentals required to install interceptor and perimeter drains . . .

Mod 1 granted a price increase of $54,715 and a time

extension of 45 days for the added work to install the drains. The relief granted pertained to the change and delay in installing the required drains, and not to delays experienced downstream which were attributable to the unrelieved perched water tables in areas other than those covered by Mod 1.

Likewise, Mod 6, issued to address the effects of unusually severe weather, contained reservation of rights language: "Tempo hereby reserves the right to dispute the number of days contained herein." (15a).

By affirming the agency board's decision, the Federal Circuit has violated two rules of contract interpretation: (1) unless the terms of a Mod are ambiguous, parole evidence may not be used; and (2) parole evidence is not to be considered if it contradicts or adds to the language of an agreement. *United States v. Triple A Machine Shop, Inc.*, 857 F.2d 579 (9th Cir. 1988) Restatement of Contracts § 237.

C. The Federal Circuit Erred By Applying General Language Over Specific Language In A Contract.

The Government directed Petitioner to bevel the inside leading edge of all wardrobe doors (25a) even though the Government admitted that the specifications did not require this beveling. Since the 84/60 contract required Petitioner to provide 672 wardrobe units with each unit having four separate doors, the total number of wardrobe doors was 2,688. After Petitioner had installed all the wardrobes, the Government found that "in some cases the doors as closed would hit each other, creating a strain on the hinges", or, if the doors were opened "simultaneously", the back edges of the two doors might touch. The Government never stated that the doors were not functional or could not be used. Even so, the Government directed that the edges of the doors be beveled. The beveling could not be

performed with the doors in place and so the doors had to be removed, planed and then replaced. The impact upon other trades was significant. With wardrobes located in every dwelling unit, the beveling and realignment of the doors affected every other finish trade attempting to finish its work.

In addition, the contract contained no tolerance requirement for wardrobe door alignment. Based solely on the Government's "eyeball measurements", Petitioner was directed to realign *all* of the wardrobe doors, which necessitated removal and readjustment.

The agency board found that the general "Material and Workmanship" clause required such beveling and realignment. In so ruling, the agency board improperly applied the general language in violation of the contract interpretation rule that specific provisions will control over general provisions in a contract. Restatement, Second, Contracts § 203(c) & (d). *Hill Material Company v. Rice*, 982 F.2d 514 (Fed. Cir. 1992). Paragraph 2.9 of Section 6C2 "Finish Carpentry", the section pertinent to wardrobe doors, states that Section 400 of Architectural Woodwork Institute (AWI) Quality Standard Custom Grade shall apply. The AWI custom grade provides for a maximum gap between doors of 5/32 inches. When the wardrobe doors were installed, the gap between the doors was 1/8 of an inch, or 4/32 of an inch. The Government's direction to bevel back the leading edges of the doors, required approximately a 1/4 inch bevel on the edge of each door. Thus, the resulting gap grew to approximately 3/8", or 12/32" far in excess of the specified maximum of 5/32". The specific provision governing the maximum gap of 5/32" between wardrobe doors was the controlling standard of workmanship for the wardrobe doors. Thus, the Federal Circuit erred by applying the general clause over the specific provision.

The agency board also found that Petitioner did not seek additional compensation for these repairs. (28a). Page 54 of Petitioner's Reply Brief before the agency board stated otherwise. "The extent of Tempo's claim concerning wardrobes is limited to the extra work required to bevel the leading edges of the doors and *to realign the doors.*" By its mistake, the agency board failed to make requisite findings on this issue which is in violation of this Court's ruling in *Kelley v. Everglades Drainage District, supra.*

CONCLUSION

Petitioner requests that this Court grant Certiorari in order to correct the manifest injustice caused by the agency board's decision affirmed by the Federal Circuit in a manner both in conflict with decisions of this Court and decisions of the Federal Circuit itself. Granting Certiorari would serve the interests of clarifying principles of government contract law governing and applicable to the power of *de novo* review. For the reasons stated above, a Writ of Certiorari should issue to review the Judgment and Opinion of the Federal Circuit.

Respectfully submitted,

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APPENDIX A — OPINION OF THE ARMED SERVICES BOARD OF CONTRACT APPEALS FILED MARCH 31, 1995

ARMED SERVICES BOARD OF CONTRACT APPEALS

ASBCA Nos. 37589, 37681
and 38576

Appeals of —

Tempo, Inc.

Under Contract Nos. DACA21-84-C-0060
DACA21-85-C-0085

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OPINION BY ADMINISTRATIVE JUDGE MOED

These appeals relate to two contracts awarded to appellant,

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Tempo, Inc., for construction of barracks buildings at Fort Bragg, NC. Tempo seeks increases in the contract prices and performance times for added work and delays claimed to have been caused by various acts and omissions of the Government. ASBCA No. 37589 relates to Contract No. DACA21-84-C-0060 (hereinafter "Contract 84-60"). ASBCA Nos. 37681 and 38576 relate to Contract No. DACA21-85-C-0085 (hereinafter "Contract 85-85"). Only entitlement is now to be decided.

ASBCA No. 37589

FINDINGS OF FACT

1. Pursuant to Invitation for Bids (IFB) DACA-84-B-0038, dated 12 March 1984; the Savannah District, U.S. Army Corps of Engineers (COE) solicited sealed bids for construction of three barracks buildings with attached Company Administration and Supply (CAS) wings, and associated site preparation and development at Fort Bragg, NC. Bids were invited on the basis of alternative 395 and 425 day performance periods, commencing upon receipt of Notice to Proceed (NTP). Bidders could bid on either or both periods. Award would be made on the basis of the lowest total price bid.

2. Tempo submitted bids on the basis of both 395 and 425 days. Another contractor was the first low bidder. That bid was allowed to be withdrawn for mistake, following which, award was made to Tempo, as second low bidder, on 25 May 1984, in the amount of $7,162,000 and for a performance period of 395 days. Tempo received Notice to Proceed on 14 June 1984, resulting in a contract completion date of 14 July 1985. The contract contained the clauses required by the Defense Acquisition Regulation (DAR) for inclusion in fixed-price

construction contracts. Among these were "Specifications and Drawings (1964 JUN)" (DAR 7-602.2); "Changes (1968 FEB)" (DAR 7-602.3); "Differing Site Conditions (1968 FEB)" (DAR 7-602.4); "Termination for Default — Damages for Delay — Time Extensions (1969 AUG) (DAR 7-602.5); "Material and Workmanship (1964 JUN)" (DAR 7-602.9); "Inspection and Acceptance (1976 OCT)" (DAR 7-602.11); "Site Investigation (1965 JAN)" (DAR 7-602.33); and "Suspension of Work (1968 FEB)" (DAR 7-602.46).

3. The three buildings to be constructed under the contract, identified in the drawings as Buildings 1, 2, and 3, consisted of 3-story barracks structures, containing 52 and 58 bedrooms variously, with CAS wings at each end. The buildings had precast concrete slab floors, masonry bearing walls, and brick and glass exterior walls. The CAS wings were single-story structures containing offices, classrooms, equipment maintenance areas and other facilities.

The Claim Document

4. The appeal relates to claims, submitted in writing, duly certified pursuant to the Contract Disputes Act (CDA), 41 U.S.C. §§ 601 *et seq.*, seeking price increases totalling $6,241,766 and performance time extensions totalling 385 days. The claim document, submitted on 26 November 1986, is composed of separate entitlement and quantum sections. The entitlement section sets forth the alleged Government acts or omissions allegedly entitling appellant to an equitable adjustment. The quantum section is composed of: added costs allegedly incurred by Tempo, presented on a total cost basis, without attribution to particular entitlement events; claims of subcontractors identified to particular aspects of the work; amounts withheld by the

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Government as liquidated damages for late completion and interest thereon; amounts withheld at the request of the Department of Labor plus interest thereon; added overhead costs; and various claims for loss of use of capital.

5. A claim is also asserted for "loss of revenues due to loss of bonding." We dismissed that claim for lack of jurisdiction in a decision on various motions brought by the Government dated 15 July 1992, published at 93-1 BCA ¶ 25,276. On 22 June 1988, the contracting officer issued a written decision on these claims, denying some for lack of merit and others for lack of substantiation. He recognized merit in some of the claims and promised to issue contract modifications in the future granting relief therefor. Tempo filed timely notice of appeal from that decision on 13 September 1988.

The Claims

Ground Water Conditions

FINDINGS OF FACT

6. Information and requirements concerning subsurface water conditions are contained in Sections 1A and 2E1 of the specifications. Section 1A, Para. 6.d stated that the Government had performed borings and laboratory tests of various types concerning foundation conditions at the site, the results of which were set forth in appendices to the specifications.

7. Section 2E1 ("Excavation, Filling and Backfilling for Buildings"), Para. 5.2.2 ("Control of Ground Water") informed the contractor that "[b]orings taken at the site indicate that ground water will be encountered" and that "[d]ewatering by

the use of well points or other approved methods will be required such that excavation for all foundations and utilities is performed in the dry." Foundation excavations were to be maintained dry "until concrete is placed, cured, and the excavation is backfilled." In that regard, Para. 5.2.1 of section 2E1 required that:

> Excavation shall be performed so that the area of the site and the area immediately surrounding the site and affecting the operations at the site will be continuously and effectively drained. Water shall not be permitted to accumulate in crawl space areas and/or in the excavation. Any accumulation of water in any part of the excavation shall be immediately drained by pumping or other satisfactory methods. . . .

8. The foundation design required installation of drain tile only at one location, namely, around the footings on the south and southeast side of Building No. 3 and CAS in order to relieve a perched water table near the surface shown in the boring logs at Borings A-1 and CS-1. These showed water tables at 5.0 feet and 6.0 feet depths respectively (tr. 4/114, 5/191). Tempo interpreted this installation as a representation that the Government anticipated encountering ground water conditions only at that location. With ground water expected only at that location, Tempo did not consider it necessary to include any amount for dewatering the site (tr. 5/17) in its offer.

9. *Subsurface Soil Data.* Mr. David B. Kulfan, Tempo's Vice President of Construction, and Mr. F.G. Budnick, Tempo's President, both participated in the preparation of its bid for this contract (tr. 1/79, 5/13). During that process they examined the

soil boring logs. That examination did not lead them to expect the ground water conditions actually encountered (tr. 1/93, 5/35). The boring logs, however, indicated the possibility of extensive ground water conditions. First, they showed the presence, throughout the site, of impervious subsurface soils. Mr. John F. Reiley, the Area Engineer at Fort Bragg during this contract and contract 85-85 testified that with a "construction man's working knowledge" of soil borings, he would be able to determine whether the material was impervious (tr. 5/202, 6/236). An "impervious" material is one which will prevent or retard the passage of water (tr. 6/218). For example, Boring CS-2, located at the center of Building No. 2, indicates the presence of fine, silty lean clay, classified under the Uniform Soil Classification System as CL material, at the 5 feet level. CL material is almost completely impervious (tr. 5/207).

10. Boring CS-3, located at the east end of Building No. 3, showed brown, fine silty sand, classification SM, which was possibly an impervious material, at the 10 feet depth. At Building No. 2, at the south end, Boring CS-4 also showed a possibly impervious material at the 5 feet level. This was a fine, sandy silt, classification ML. At the north end of Building No. 2, Boring CS-6 showed fine, fat clay, classification CH, a completely impervious soil, located at the 7.5 feet depth. Immediately below, at the 15 feet depth of that boring, the log provides another instance of fine sandy silt, classification ML.

11. At the west end of Building No. 1, Boring CS-7 showed a layer of highly impervious soil, classifications CL and CH, located at the 6-15 feet level. Boring CS-8, at the center of Building No. 1, showed impervious material in the form of clayey sand near the surface. Likewise, Boring CS-9, at the east end of that building, showed a layer of classification ML material at the 7.5 feet level.

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12. Another indication in the boring logs of extensive ground water conditions were water tables shown very near the surface. In the case of Boring CS-1, at the west end of Building No. 3, the water table was found 6 feet below the surface. With respect to Borings A-1 and A-6, at the western edge of the site, between Building Nos. 1 and 3, the water table was found at depths of 5 feet and 5.5 feet, respectively. These abnormally elevated water tables were instances of perched water conditions. These occur where impervious material prevents the percolation of subsurface water downward, trapping the water at a higher than normal elevation and creating a false water table (tr. 6/218).

13. *Chronology.* In accordance with Tempo's plan, work began with construction of Building No. 1. Work at that site began on 11 July 1984 with demolition, site clearance and grading. On 12 July 1984, Tempo, through Mr. Kulfan, gave written notice to the contracting officer that it had encountered the following which it characterized as constituting a differing site condition:

> Soil boring CS-7 indicates ground water was encountered at 12.5' to 13.0 feet of depth. Ground water was actually encountered at approximately 4.0' to 4.5' of depth.

(R4, tab 88). At the hearing, Mr. Kulfan testified that the reference to Boring CS-7 was erroneous and the correct location of the ground water condition described above was in the vicinity of Boring CS-8 at the center of Building No. 1. (Tr. 1/116)

14. The Government made an investigation of the site after receiving that notice and was unable to find the condition

reported. In a letter dated 3 August 1984, Mr. Reiley, informed Tempo that the Government's inspector had "addressed this problem with your CQC representative Mr. Neal Owen on July 26, 1984 and at that time no visible problem with ground water could be observed in the area of soil boring CS-07" (R4, tab 91). Mr. Kulfan did not then, or at any time prior to the hearing, inform the Government of the alleged locational error in its notice. Moreover, no reference to ground water problems near either Boring CS-7 or CS-8 at the time of the notice is to be found in Tempo's Quality Control Daily Reports, in its Superintendent's Diary, in the Government Inspector's Quality Assurance Reports or in any other contemporaneous documents in the record. Given the state of the record, there is no basis for finding as fact that the conditions reported in Tempo's 2 July 1984 notice existed near either Boring CS-7 or CS-8.

15. As of 10 August 1984, Tempo had accomplished clearing and grubbing of the entire site and had excavated most of the foundations (tr. 4/279). On that date, there was unusually heavy rainfall at the site, totalling 2.95 inches, which flooded all of the footings, trenches and excavations. Much of the flooding was caused by run-off of rain from higher ground on the north side of the site. Building No. 2 was at an elevation lower than the other building sites and, therefore, was more heavily affected by the runoff.

16. Tempo had discounted the possibility of run-off onto the site from that direction. During a pre-bid site visit, Mr. Budnick, had noted a road traversing that higher ground which was equipped with curbs and gutters and storm sewers "strung out along the whole perimeter of our contract" (tr. 5/15). He expected that the sewers would capture any rain water coming off the higher ground, before it could run off onto the site. He was wrong.

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17. The flooding from run-off at the site of Building No. 2 occurred after the foundations had been dug and Tempo was making ready to set wooden forms for footings (tr. 4/127). The velocity of the runoff was such as to wash away curbs and protective berms installed by Tempo around the excavation (tr. 4/123, 282). In order to divert run-off from the site, Tempo dug drainage ditches with swales and catch basins around the site (exh. AT-3) in order to collect water which would then be pumped out. Pumping out water required two days with additional time needed for drying out the soil sufficiently to allow work to proceed. After rain storms of that severity, 6 to 8 working days were required for drying out the site (tr. 4/130)

18. On 8 August 1984, Mr. Reiley observed ground water seeping into the excavation for Building No. 1, in the vicinity of the west wing, which was near Boring CS-7 (tr. 5/187). As of that date, Tempo had already excavated to grade, which was the floor of the crawl space and had begun digging out footings below that level (tr. 4/115). The Building No. 1 crawl space floor was approximately 10 feet below the surface. According to the log for Boring CS-7, the soil material at that level, forming the floor of the crawl space, was clayey sand, classification SC. Immediately below that material were layers, totalling 21 feet, of CH fat clay and CL lean clay, both highly impervious materials (R4, tab 98 at 2).

19. On 14 August 1984, Mr. Reiley and representatives of Tempo met at the site to view and discuss the water conditions. The ground water had filled the excavation to the extent that footings could not be placed. On that occasion, Tempo undertook to install sump pumps to remove water and Mr. Reiley undertook to obtain expert advice on the matter from the Savannah District (R4, tab 94). It was Mr. Reiley's view, however, that the ground

water conditions encountered were attributable to the abnormal amounts of rainfall in July and August 1984 which had caused higher than normal water tables (R4, tab 97).

20. A Savannah District COE soils engineer, Mr. William A. Davidson, visited the site on 22 August 1984. As set forth in his report, dated 27 August 1984 (R4, tab 98), he observed in regard to ground water flow near Boring CS-7 that "[m]ost of the water that is exiting [at that location] is occurring at the top of the CH layer" (*supra*, at 2). In his opinion, the ground water had perched on this layer of impervious material and had escaped upon exposure by the excavation cut.

21. Mr. Davidson expressed the opinion, which was not challenged by Tempo, that the volume of perched ground water had been increased by rainfall passing through upper, already saturated, soil but stopped at that level because it was unable to pass through the lower, impervious material. There was considerable rain during the 30 day period preceding 8 August 1984 when Mr. Reiley first noted ground water flow at that location. There was rain on 19 days, with more than two inches on three of those days.

22. Messrs. Reiley and Davidson considered that there was a need for means of draining off water from rainfall that would perch on the impervious clay layers that existed across most of the site. This would be accomplished by cutting through these layers around the perimeter of the site to allow perched water accumulations to escape. Foundation and interceptor drains would be installed at the cuts to collect and carry away the released water (R4, tab 98).

23. As noted previously, the contract provided for

foundation drains in only one location — around the footings on the south and southeast sides of Building No. 3 and its CAS wing. In conformity with Mr. Davidson's recommendations, the Government asked Tempo for a price proposal for installing perimeter foundation drains around all three buildings and interceptor drains at several locations (R4, tab 25). In its initial response, dated 7 September 1984, Tempo proposed a price of $74,746 (inclusive of mark-ups for prime and subcontractor overhead and profit) and an 80-day time extension. The proposal contained a note that:

> [The price] does not include any costs associated with the delays incurred due to this change. The actual delays and their resultant costs will be addressed under separate correspondence.

(R4, tab 99)

24. On 20 September 1984, Tempo submitted a supplemental proposal increasing its original price proposal by $67,881, to a new total of $142,627. The increase was described as being for "extended field overhead" and "extended home office overhead" attributable to the following types of delays that Tempo "has and will experience" in connection with the change:

> 1. Delays due to discovery, recognition, and resolution of the soil problem.
>
> 2. Delays due to the period of time between resolution, presentation, negotiation, and notice to proceed authorization.

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> 3. Delays due to accomplishing the work under the modification.
>
> 4. Delays due to "drying out" of the work as a result of the work accomplished under the modification.
>
> 5. Delays due to the work schedule shifting into periods of inclement weather as a result of the above, thereby affecting productivity of weather sensitive work items.
>
> 6. Delays due to lost productivity as a result of lack of coordination and changed work schedules.

(R4, tab 101 at 5).

25. At the close of its revised proposal, Tempo stated that if a settlement on the basis thereof were not reached and "if the matter goes to litigation we will introduce additional impact costs (lost productivity, escalation, idle labor, etc.,) which we have not included" (R4, tab 101 at 8). These costs are not further described in the record. Also not further described are added costs for "ripple effect . . . on downstream work for the installation of the perimeter drain" which, according to Tempo's president, Mr. Budnick, had not been included in modification P00001 (tr. 5/42).

26. Subsequent to receipt of Tempo's proposals, the Government decided to reduce the scope of the work by deleting the drains around Building No. 2, thereby reducing the installation from 3,840 linear feet (LF) to 1,490 LF. The

reduction was prompted by the observation, subsequent to requesting the proposal, that ground water was entering the site only from the western side, which was the site of Building Nos. 1 and 3. Water was not entering the site of Building No. 2. (Tr. 5/196-98)

27. Negotiations on a contract modification to add those installations (hereinafter referred to as Modification P00001) were concluded on 25 September 1984 and notice to proceed with the work received on 4 October 1984 (QA report 4 October 1984). Performance of Modification P00001 had progressed sufficiently by 18 October 1984 to allow the start of excavation of the footings for Building No. 1. (QA reports 4 October, 18 October 1984). On 11 December 1984, the parties entered into Modification P00001 establishing a price increase of $54,715 and a time extension of 45 days for the added work. The price increase consisted of $27,715 for the work itself and $27,000 for added overhead costs of the extended performance period at the daily rate of $600 for the 45-day extension. (R4, tab 25)

28. Modification P00001 contained the following provision:

> It is understood and agreed that this modification constitutes compensation in full on behalf of the contractor and its subcontractors and suppliers for all costs and markup directly or indirectly attributable to the change ordered, for all delays related thereto, and for performance of the change within the time frame stated.

29. During negotiations of Modification P00001, it was

understood by both parties that delays caused by unusually bad weather would be addressed separately and subsequently in another contract modification. By letter dated 4 January 1985 (R4, tab 104), Tempo requested a performance time extension for 34 work days of delay allegedly caused by bad weather conditions. Under the "Commencement, Prosecution and Completion of Work" clause of the contract, 36 calendar days described as "[t]ime allowed for weather delays anticipated to be incurred during the contract period" were included in the time allowed for completion of the contract. The clause also provides that:

> No time extension for delays due to weather will be allowed until the actual weather delays exceed the weather delays anticipated to be incurred during the contract period. Actual weather delays will be computed by converting work days (lost due to weather) to calendar days. Non-work days (weekends and holidays) will not be considered when computing actual weather delays.

30. According to Tempo's computation, the claimed 34 work days of delay translated, under the above provision, into 48 calendar days of delay. Subtraction of the 36 calendar days deemed included in the original performance period pursuant to the contract resulted in a net claimed extension of 12 days. The Government disputed Tempo's count on the ground that some of the claimed delay days were concurrent with delays for which time extension had already been allowed under Modification P00001 (R4, tab 105). Tempo responded by acknowledging erroneous inclusion of 8 days of concurrent delay but increasing its claimed gross time extension to 52 calendar days, yielding a net of 16 days extension.

31. On 1 March 1985, Tempo's superintendent, Mr. Louis Behm, and the Government's inspector discussed the matter of time extension for weather delays and arrived at a total of 37 work days of such delay between 14 June 1984 and 28 February 1985. They converted that amount into 48 calendar days. Deducting the 36 days included in the original contract performance period for such delays yielded a net time extension of 12 days (R4, tab 62). That result was embodied in Modification P00006, dated 1 April 1985.

32. Modification P00006 was signed by the contracting officer on 9 April 1985 and by Tempo on 15 April 1985. At the time of signature, Tempo added a handwritten statement to the text that "Tempo hereby reserves the right to dispute the number of days contained herein." The record indicates that the reservation related to the contracting officer's refusal to recognize, as excusable, four claimed days of delay in placement of concrete topping due to cold temperatures. (R4, tabs 106-09).

33. Tempo had cited the specification and trade practices as prohibiting the concrete topping work. In a written decision dated 26 December 1985, complying with the Contract Disputes Act (CDA), 41 U.S.C. §§ 601 *et seq.*, the contracting officer determined that there was no such prohibition of the work and, accordingly, refused the extension for that cause. He also reviewed the allowance of excusable delay made in Modification P00006 and determined that said modification "properly extends the contract completion date for adverse weather experienced through February 28, 1985 and I deny your request for an additional time extension" (R4, tab 63). Tempo has not appealed that decision. Tempo's claim document, submitted on 26 November 1986, seeks increases in price and performance for

the effects of the ground water conditions on the basis that these constituted differing site conditions. These requests were denied entirely in the contracting officer's decision.

DECISION

During the course of excavating for the foundations of the buildings, ground water seeped out of the cut walls of the excavations and filled up the holes, interrupting Tempo's work and causing added expense. Tempo contends that the ground water was a differing site condition and, pursuant to that clause of the contract, seeks equitable adjustments in price and performance time for the added costs and delay resulting from that condition.

The Government's primary defense is that all elements of the claim were settled by the parties in contract modifications P00001 and P00006. Tempo responds that modification P00001 settled only the costs and added time of providing additional drains around Building Nos. 1 and 3 and Modification P00006 settled only the time extension due for unusually bad weather in July and August. According to Tempo, there remained, outstanding and unresolved, claims for effects variously described as "impact of the differing site conditions and the work shifted downstream" and the "downstream effect of the perched water condition" (app. reply br. 4, 13). There is nothing whatever in the record describing or detailing these alleged effects. Since we do not know what they were, it is difficult for us to agree with Tempo's assertion that they were not included in the settlements made in modifications P00001 and P00006.

Quite apart from this evidentiary gap in Tempo's case, the history of negotiation of these modifications indicates that they

settled all aspects of the ground water problem. Tempo's initial proposal, dated 7 September 1984 contained a statement expressly excluding "the delays incurred due to this change" (finding 23). The negotiations culminating in modification P00001, however, were not based on that proposal but, rather, on a revised proposal, dated 20 September 1984.

The revised proposal increased the price by $67,881 — almost doubling the initial offer. The additional amount was stated by Tempo as being for "extended field overhead" and "extended home office overhead" assertedly caused by six listed types of delay that Tempo "has and will experience." Two of these involved "downstream" effects, namely, "delays due to the work schedule shifting into periods of inclement weather. and "delays due to lost productivity as a result of lack of coordination and changed work schedules." The revised proposal stated, also, that Tempo had claims in mind for "additional impact costs (lost productivity, escalation, idle labor, etc.,)" that had not been included in the price offer but which would be asserted if negotiations on the proposal were not successful. (Finding 25)

Modification P00001, which was agreed to by the parties on 11 December 1984, provided for price and performance time increases. Of the $54,715 price increase, approximately one-half was for added overhead costs of the 45 days time extension granted. The modification also contained a broad-form provision stating agreement and understanding that the modification constituted "compensation in full . . . for all costs *directly or indirectly attributable to the change* [and] for all delays related thereto." (emphasis added). (Findings 27, 28)

There was no exception or exclusion in modification P00001

for the potential claim for "additional impact costs" mentioned in the revised proposal. If Tempo wished to preserve this known claim for possible later assertion, an exception was necessary because it plainly came within the scope of "costs directly or indirectly attributable to the change" agreed to have been fully compensated for in the modification. In the absence of that exception, that claim was encompassed in the accord and satisfaction effected by modification P00001. *Robert McMullan & Son*, ASBCA No. 19023, 76-1 BCA ¶ 11,728 at 55,903; *Malloy Construction Co.*, ASBCA No. 23264, 79-1 BCA ¶ 13,866.

The basis of Tempo's present claim is that the ground water encountered during excavation constituted a differing site condition. There is no contention or evidence that the occurrence qualified under Category 2 of the contract clause, namely, an unknown, unusual condition "differing materially from [that] ordinarily encountered and generally recognized as inhering in [such] work." The issue, instead, is whether the conditions met the criteria of Category 1 as "subsurface or latent physical conditions at the site which differ materially from those indicated in this contract."

Tempo contends that the actual conditions differed materially from those indicated in the contract in two respects. First, Tempo interprets the drawings showing drain tile to be installed at only one location, namely, around the footings on the south and southeast sides of Building No. 3, in the context of the fact that this was the location of the only perched water shown in the soil borings, as representing that ground water would be encountered only at that location (app. main br. 9, app. reply br. 11). On that basis, Tempo asserts that ground water occurring at other locations, such as the vicinity of the west

wing of Building No. 1, constituted a Category 1 differing site condition.

Tempo contends, also, that the soil borings did not disclose either the perched water conditions that were the source of the ground water flow or that there were layers of impervious material over a large part of the subsurface (app. reply br. 11). The latter assertion is contrary to the record. The boring logs identified highly impervious soils at the locations of all three buildings (findings 9-11).

Messrs. Budnick and Kulfan did not detect that condition in pre-bid examination of the boring logs (finding 9). Tempo argues that the testimony of these "reasonably experienced contractors" should be preferred over the testimony of Government engineers who were able to find that condition in the logs (app. reply br. 5).

Tempo was deemed on notice of any information that would be discovered by a "reasonably intelligent contractor-layman." *Kaiser Industries Corp. v. United States*, 340 F.2d 322, 324 (Ct. Cl. 1965). It was not constructively on notice of information that only a geologist would have discovered through a "scientifically educated and skeptical analysis" of the contract documents. *Stock & Grove v. United States*, 493 F.2d 629, 631 (Ct. Cl. 1974). Whether Tempo should have discovered the impervious nature of the subsoils under the foregoing standards was a question of fact included in its burden of proof that the condition encountered could not have been reasonably anticipated from a study of the contract documents. *Smith Contracting Co. v. United States*, 412 F.2d 1325, 1338 (Ct. Cl. 1969).

Appendix A

The only evidence on this matter is the unrebutted testimony of Mr. Reiley that as part of his "construction man's working knowledge" of soil borings, he would be able to determine whether the subsoil contained impervious materials (finding 9). Not having secured evidence negating that testimony, we conclude that in bidding the contract, Tempo was deemed on notice of those impervious soil conditions.

Tempo is correct in asserting that the boring logs did not indicate all of the perched water locations. The only ones shown in the logs were at borings A-1, A-6, and CS-1 (finding 12). As indicated by reports of ground water seepage during excavation, perched water was also found in the vicinity of boring CS-7 on or about 8 August 1984. The record, however, does not establish that the boring logs were inaccurate in this respect.

It is probable that the seepage was the product of heavy rains that occurred during July and August 1984 that passed through the upper layers of water-saturated soil and perched on top of the lower layer of impervious soil (findings 21, 22). Increases in ground water levels caused by heavy rainfall are not chargeable to the Government under the Differing Site Conditions clause. *E.W. Jackson Contracting Co.*, ASBCA No. 7267, 1962 BCA ¶ 3325

Tempo points to the issuance of modification P00001 providing for the installation of drains around Building Nos. 1 and 3 as evidence that the ground water conditions encountered were considered by the Government, also, as a differing site condition. The record does not require that conclusion. It indicates that the purpose of the additional facilities was not dewatering during construction but to provide a permanent means for draining off excess ground water that might collect

around foundations in the impervious soil after heavy rains such as occurred in July and August 1984. There is no evidence or contention that the original design of the foundation drainage system was defective in failing to provide the facilities added by Modification P00001.

For the reasons set forth above, the contracting officer's denial of this claim was correct.

Concurrent Erection of Masonry Wythes

FINDINGS OF FACT

34. Specification section 4M2 ("Reinforced Masonry"), Para. 21.1 ("Erection") requires that "[i]n cavity wall and composite wall construction, both the inner wythe and outer wythe shall be laid up together." The term "wythe" is used in the trade to refer to a single or separate width or row of construction in a wall. *Mecon Co.*, ASBCA No. 17609, 74-1 BCA ¶ 10,496 at 49,698. The present instance relates to the exterior walls of the buildings which consisted of an inner wall constructed of concrete masonry units (CMU) and an outer brick veneer wall (tr. 4/58).

35. Concurrent construction of the CMU and brick walls is commonly referred to as "double wythe" construction. Constructing the walls serially is referred to as the "single wythe" method. During discussions with its masonry subcontractor, Phifer & Goodwin Contractors, Inc. ("Phifer"), after award of the contract, Tempo learned that double wythe construction was much more time-consuming than the single wythe method. That resulted from several factors. First, brick and block can be laid more quickly when the walls are erected

separately, making single wythe more efficient than double wythe. Single wythe construction would expedite the completion of the buildings inasmuch as they could be roofed and closed in permitting inside work to proceed, before the brick wythe had been constructed.

36. Secondly, the slower pace of double wythe construction meant that the scaffolding needed for laying brick would have to be maintained in place for the full period of erecting the walls. The scaffolding would obstruct window openings in completed sections below, interfering with their use for loading of materials into the buildings for interior work. If single wythe construction were permitted, the scaffolding would be taken down as the CMU walls were built and, thereafter re-erected only at the wall sections where brick was being installed, leaving other walls and openings unobstructed and available for use in movement of materials. If single wythe construction were permitted, the brick veneer on the exterior would be installed after closing-in, concurrently with interior work and without interference therewith. (Tr. 4/135-36)

37. Tempo had not considered the schedule implications of the specification requirement at the time of composing its bid. Now, after award, it concluded that double wythe construction would add six weeks construction time to each building and four and one-half months to completion of the contract as a whole. On 27 July 1984, Tempo applied to the Area Engineer, Mr. Reiley, for a waiver of that requirement. By letter dated 16 August 1984, Mr. Reiley notified Tempo that the waiver had been granted. The contemporaneous records contain numerous notations of CMU alone being erected for exterior wall, indicating that Tempo relied on the waiver in the performance of the work (QC reports 30 August, 4 September,

7 September, 11 September 1984). On 9 October 1984, however, the Government withdrew the waiver. Tempo reapplied for the waiver on 22 October 1984. The Government responded on 14 November 1984 that the waiver would not be reinstated.

38. After completion of the work, Phifer submitted a claim to Tempo in the amount of $413,482 for additional costs incurred as the result of the rescission of the waiver and reinstatement of the double wythe requirement. The claim consisted of the increased labor costs associated with the less efficient double wythe method, added rental costs for scaffolding which remained in place for a longer period, and additional material handling expense associated with loading materials (for construction of partition walls) into the buildings with the scaffolding in place. Phifer's claim was included in, and is a part of, Tempo's claim document dated 26 November 1986.

39. The Government and Tempo subsequently agreed to extract Phifer's claim for separate negotiation. On 6 January 1989, the parties entered into bilateral contract modification P00036 (Part I) tentatively settling the Phifer element of Tempo's claim in the amount of $145,000. Specifically excepted from that settlement was "Tempo's right to seek compensation for additional costs incurred by Tempo [as opposed to Phifer] as a result of the change from single wythe to double wythe construction." The parties were unable to agree on the final amount due for the Phifer element of Tempo's claim. On 7 November 1989, the contracting officer unilaterally issued contract modification P00036 (Part II) determining that $215,496, which included mark-ups for Tempo, was the final amount due for that element of Tempo's claim.

40. After reinstatement of the double wythe requirement,

masons were shifted by Phifer to construction of the exterior walls so that closing-in of the buildings would not be delayed. This caused masonry work in the CAS wings to be deferred until a later stage of the contract. There is no evidence that delay in completion of the contract resulted from this matter. (Tr. 1/152-55).

DECISION

The waiver of the double wythe requirement by Mr. Reiley, a representative of the Government with authority to take that action, coupled with performance by Tempo in reliance thereon served to make the waiver binding on the Government. The subsequent purported rescission was, therefore, ineffective. It amounted, instead, to a constructive change order entitling Tempo to an equitable adjustment for any increased cost and performance time resulting therefrom. *Gresham & Co. v. United States*, 470 F.2d 542 (Ct. Cl. 1972); *Worldwide Parts*, ASBCA No. 38896, 91-2 BCA ¶ 23,717 at 118,712; *Walsky Construction Co.*, ASBCA No. 36940, 90-2 BCA ¶ 22,934. On that basis, Tempo was entitled to Phifer's additional costs for reinstituting double wythe construction and to recover for other proximately caused effects such as disruption of work in the CAS wings.

Wardrobe Doors

FINDINGS OF FACT

41. The contract required Tempo to furnish and install wardrobes in the living units of the buildings. The wardrobes, four of which were installed in each living unit, were constructed of wood and measured 8' high by 4' wide by 2' deep. Each wardrobe had two large doors in the lower section and two small

doors in the upper section. The doors were hinged at the outer ends and met at the center. (Exh. AT-229; tr. 4/170-75)

42. In December, 1985, the Government found that in certain of the installed wardrobes, the back leading edges of doors would collide when opened simultaneously (tr. 5/258). Tempo was directed to correct this condition, which related mostly to the large lower doors, by beveling the back leading edges so that the doors would clear each other when opened. Tempo complied with the direction. The work required removal and reinstallation of the doors, sometimes more than once if the initial beveling was insufficient. (Tr. 4/178-79)

43. In some of the installations, it was noted also that the upper, smaller doors were out of alignment. At the center, where they met, one door would be higher than the other (tr. 5/256). The misalignment resulted from the recognized tendency of doors, with short height and longer width, to sag at the ends (tr. 4/181). Correction of this condition usually required removal of the door from the hinge. The correction normally consisted of either rabbeting the hinge more deeply in the bottom portion so that it would draw the door upward or shimming the lower hinge so that the far lower end of the door would be raised. (Tr. 4/182) Tempo does not seek additional compensation for these repairs (app. reply br. 54).

44. The provision of the specifications relevant to these conditions is found in Section 6C2 ("Finish Carpentry"). Para. 2.9 ("Materials: Casework, cabinets and counters") provides that:

> The Quality Standards of the Architectural Woodwork Institute shall apply. All casework

> shall be AWI Quality Grade Custom as defined in Section 400 of AWI Quality Standards.

45. The record contains Section 400 of the AWI Quality Standards, relating to architectural cabinets. These provisions do not address the conditions described above or workmanship or operation of the doors (exh. AT-248) and there is nothing in the record as to coverage of the same elsewhere in the AWI Quality Standards.

46. The contract contains the "Material and Workmanship (1964 JUN)" clause, DAR 7-602.9, Para. (a) provides, in pertinent part, that:

> Unless otherwise specifically provided in this contract, all equipment, material, and articles incorporated in the work covered by this contract are to be new and of the most suitable grade for the purpose intended.

47. The contract also contained the "Inspection and Acceptance (1976 October)" clause, DAR 7-602.11, which provided, in part, that:

> (b) The Contractor shall, without charge, replace any material or correct any workmanship found by the Government not to conform to the contract requirements, unless in the public interest the Government consents to accept such material or workmanship with an appropriate adjustment in contract price.

Para. (b) of the clause requires that "[a]ll work under this contract shall be performed in a skillful and workmanlike manner."

48. Beveling increased the time and effort necessary for completing the wardrobe installation (tr. 2/17, 4/184). Tempo expended additional effort, also, to correct delamination of veneers on the wardrobes and to repair chipping in the corners of the doors (tr. 5/257).

49. During performance, Tempo took the position with the wardrobe supplier that the condition corrected by beveling was a defect for which supplier was responsible. On 13 September 1985, Tempo wrote to the supplier stating that:

> [W]e consider your firm to be in breach of its contractural [sic] obligations.
>
> The wardrobes as supplied are defective and therefore not acceptable. Specifically the doors are bevelled improperly or not at all, causing most units to be hinge bound.
>
> * * *
>
> [Y]ou are hereby directed to provide all necessary labor and materials to remedy these [defects] within fourteen (14) days of this writing. Failure to comply with this directive will result in the following:
>
> a) Tempo, Inc. will notify the Corps of Engineers . . . that we have provided them with defective and poorly constructed wardrobes.

> b) Tempo, Inc. will remedy all such defects.
>
> c) Tempo, Inc. will hold your firm accountable for all costs associated therein. . . .

(R4, tab 162)

50. On 14 October 1985, Tempo sent the supplier of the wardrobes, J.A. Woodcraft, a bill in the amount of $21,531, for costs incurred by Tempo to "correct manufacturing defects to wardrobes." The corrective work included "modify[ing] doors." (R4, tab 164) Woodcraft objected to the demand on the ground that the work in question was "normal adjustment" beyond the scope of its supply contract (R4, tab 165). Tempo's response was a reiteration of its position that the work in question was "due to serious manufacturing defects" on the part of Woodcraft (R4, tab 166).

51. Nowhere in the contemporaneous record is there any assertion by Tempo that the demands by the Government for bevelling edges to prevent collision of doors constituted directions for extra, additionally compensable work. In the present claim, however, Tempo seeks an increase in contract price for that work and for disruption of other work under the contract and delay of contract completion allegedly resulting therefrom.

52. No claim, however, is asserted with respect to another type of required repair that was caused by an error made by Tempo's painting contractor. As installed, the wardrobes were to have a natural wood finish covered with a coat of varnish. In

the erroneous belief that the wardrobes were required to be painted, the painting contractor applied a primer coat to approximately 200 of the total 672 wardrobe doors (tr. 2/11). The affected doors were shipped back to the supplier to have the paint stripped and surfaces refinished. Some doors had to be refinished a second time because the paint continued to show through (tr. 2/13). Work on the wardrobes began in September 1985. Work on the doors was completed by 26 September 1986 (R4, tab 69, exh. 1).

53. Refinishing was also required in some instances to remove overspray from painting of room ceilings. This was avoided during initial painting of these surfaces inasmuch as the wardrobes were installed afterward. The overspray occurred during subsequent repainting of the ceilings as the result of workmen neglecting to properly cover the wardrobes before performing the work (tr. 2/15-16).

DECISION

Tempo asserts that the wardrobe units furnished were "in complete compliance with the quality standards set out in the contract" (app. main br. 45) and, therefore, the directions by the Government for bevelling and realignment of the doors constituted constructive change orders.

We find to be more persuasive the position taken by Tempo during contract performance, at the time these conditions were first noted, that they had been caused by "serious manufacturing defects" on the part of the supplier. Consistent with that position is the complete absence of any claim at that time that the Government's directions amounted to change orders.

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The "Material and Workmanship" clause of the contract required all work to be performed in a "skillful and workmanlike manner" (finding 46). Wardrobe doors that collide in normal operation plainly do not meet that standard. The Government was entitled to the correction of this defect under the "Inspection and Acceptance" clause of the contract. There is no issue as to the appropriateness of bevelling and realignment for effecting such corrections. Accordingly, inasmuch as they served only to secure that which the Government was already due under the contract, the directions for these actions did not, and could not, constitute constructive change orders. The denial of this claim was, therefore, correct.

Concrete Topping

FINDINGS OF FACT

54. The contract required that a two-inch concrete topping be installed over the precast concrete floor planks. The topping, in turn, would be covered with vinyl floor tiles. Provisions pertinent to the topping are set forth in sections 3C1 and 3D3 of the specification. Section 3C1 ("Concrete for Building Construction") contains the following in Para. 21 ("Finishing Concrete Floor and Roof Slabs"):

> Finished surfaces shall be plane with no deviation greater than 1/8 inch when tested with a 10-foot straightedge. Surfaces shall be pitched to drains.

55. Section 3D3 ("Precast Concrete Floor and Roof Units contains the following in Para. 7.1 ("Concrete Topping"):

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> Concrete shall be finished, suitable for the intended purpose, to true plane surfaces within a tolerance of 1/8 inch in 10 feet as determined with a 10-foot straightedge.

56. Tempo subcontracted the placement of the topping to Abney Construction Co. (Abney). The record does not indicate the date when the work began. The first substantial reference to the progress of the work is in a letter dated 19 November 1984 from the COE's Acting Area Engineer to Tempo stating, in pertinent part, that the topping was not "acceptable" (R4, tab 176). Tempo replied on 21 November 1984 that it would "grind [and] fill where needed on existing floor to provide an acceptable product" (R4, tab 177).

57. Abney completed placement of topping prior to 9 May 1985. On that date, it submitted an invoice to Tempo for final payment of its subcontract in the amount of $9,248. In making payment to Abney, Tempo withheld $2,248 for uncompleted "topping grinding and leveling" (exh. AT-28). During the period 9 May – 19 June 1985, Abney performed work described in Tempo's daily Quality Control (QC) reports as "grinding [floors] to level." The last day on which Abney performed work on the topping was 27 June 1985.

58. By letter dated 13 December 1985, Mr. Reiley informed Tempo that he had observed floors that were "neither level nor smooth and [which] will not be suitable for floor tile installation in their present condition." He stated that he was "bringing this matter to your attention now, because it is evident that extensive time and effort will be required in order to properly prepare concrete slabs for tile installation." (R4, tab 180)

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59. Upon receipt of Mr. Reiley's letter, Tempo called upon Abney to return to the site and complete needed grinding and leveling of the floors. Abney failed or refused to do so. (Tr. 3/16). Tempo's response was to issue a letter to Abney, dated 16 December 1985, giving notice that it considered Abney to be in breach of the subcontract for failure to timely perform work and for failure to perform work in accordance with specifications. Abney was told that Tempo would complete the work and charge back to Abney all excess costs of performance and "all costs to replace defective work" (R4, tab 181).

60. Beginning on 6 January 1986 and almost daily until 25 June 1986 (R4, tab 69 exh. 1), Tempo was engaged in work on the topping described in the QC reports as: chipping floors "to level"; chipping floors at high spots; applying Lev-L-Astic, a levelling compound, to chipped-out areas or ground-down spots; and "levelling floors" (9 June 1986). Installation of tile began on 23 April 1986.

61. Tempo's work on the topping caused disruption of other finishing work. While work on the topping was underway, other trades, such as electricians installing wall switches, light fixtures, and smoke detectors, the mechanical contractor installing fan coil units and plumbing connections, and the carpenter working on wardrobes and vanities could not gain access to rooms for work. The tiling subcontractor could not proceed in a particular space until the floor work was completed. Inasmuch as many rooms were involved in work on topping, the disruptive effects were extensive. (Tr. 1/239-241)

62. Tempo contends that Abney had completed installation of topping and correction of defects by June 1985. In Tempo's view, Mr. Reiley's letter of 13 December 1985 was a direction

that the topping be made level in the sense of a having a plane parallel to the horizon or surface of the earth (tr. 1/236, 3/316). The parties agree, however, that sections 3C1 and 3D3 of the specification (findings 54, 55) calling for "plane" and "true plane" surfaces do not require "levelness" in the above-defined sense but, rather, flatness of the topping surface so that it will be suitable for installation of tile (tr. 5/60, 6/96-98). There is no evidence whatever that the Government required anything other than flatness of the surface.

63. Tempo contends also that subsequent to 13 December 1985, the Government required that the floors not exceed the 1/8 inch in 10 feet tolerance for flatness prescribed in specification sections 3C1 and 3D3 (findings 54, 55) (tr. 5/62). Tempo asserts that the largest portion of the chipping out, grinding and levelling performed during the period January – July 1986 was performed in response to that requirement (tr. 1/237).

64. Inspection of the topping for compliance with the specification more than eleven months after pouring would have been much too late. This should be performed as soon as possible after placement. Usually this can be done on the next day. (Tr. 4/145). After that time accurate measurements cannot be assured inasmuch as flatness will be affected by addition of loads on the surface, concrete "creep," *i.e.*, the gradual deformation of concrete under stress, concrete "shrinkage" caused by drying, and other causes (prefiled testimony T.Z. Chastain, 2)

65. Tempo also produced expert testimony contesting the achievability of the 1/8 inch in 10 feet tolerance for flatness of the topping (pre-filed testimony of T.Z. Chastain; tr. 3/297-98, 3/302, 3/326). We are not required to make findings of fact on

that matter because there is no evidence whatever in the record that the Government applied that tolerance at any time to reject installed topping as nonconforming or to require additional work from Tempo. The Government did not measure the floors (tr. 5/264) and did not require that the topping meet the exact tolerances specified (tr. 5/265). The standard employed by the Government in the inspection of topping for flatness employed, instead, was whether the surface was sufficiently free of high and low spots to serve as an adequate substrate for the application of tile (tr. 5/265).

66. That standard was stated in Mr. Reiley's letter of 15 April 1986 to Tempo, written after an inspection visit to the site. He observed that:

> [T]he concrete floors in some areas are not acceptable as a substrate for the application of [vinyl floor tiles].
>
> * * *
>
> I direct you to inspect each floor in each room for contract compliance prior to the installation of [vinyl floor tiles] and furnish my Q/A staff a list of your findings as to compliance of the floors.

(R4, tab 183)

67. Tempo responded by letter, dated 5 May 1986, asserting that the direction to make inspections and furnish a list of findings constituted a change order. Nothing was said, however, concerning the deficiencies alleged by Mr. Reiley. (R4, tab 189)

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68. Tempo's claim that the Government insisted upon the tolerance of 1/8 inch in 10 feet for flatness is based on the testimony of Messrs. Kulfan, Budnick and Behm, its vice president, president, and job superintendent, respectively. Neither Mr. Kulfan nor Mr. Budnick had received such a direction. Mr. Kulfan derived the issuance of that direction from his interpretation of references to "levelling" of topping in the QC reports (tr. 1/236-37). Mr. Budnick's testimony was derived from an unidentified person who told him that "this inspection method was being enforced on us" (tr. 5/63).

69. Mr. Louis Behm served as Tempo's field superintendent for the contract from July 1984 until sometime in 1987 (tr. 4/103). He testified at the hearing that the Government had required additional work on high and low spots in the topping that had already been ground down or filled in to comply with the specification (tr. 4/265). Mr. Behm, however, had very little personal knowledge of these matters. At the time of these events, he had already been designated Tempo's field superintendent for the 85-85 Contract and was occupied with that project. Matters under the 84-60 Contract were being handled on a day-to-day basis by an assistant superintendent who told Mr. Behm that the Government was "not accepting the floors" (tr. 4/265). Mr. Behm was at the 84-60 Contract site only "occasionally" and could not "exactly say" where alleged extra work was being performed or the nature of such work. His assistant superintendent was not produced for testimony nor identified for the record. (Tr. 4/265)

70. Mr. Behm remembered being told repeatedly that the floors were not acceptable to the Government. He was not able, however, to recall specific work so characterized or particular contract requirements identified as not complied with or the

names of Government personnel who made these statements. (Tr. 4/270-72) On that record, we are not able to give significant weight to Mr. Behm's testimony in these regards.

71. In a letter to Tempo dated 15 April 1986, Mr. Reiley voiced concern as to the use of bush hammers and jackhammers for removing high spots in the topping. On 5 February 1986, equipment used by Tempo for "correcting floor to level had caused damage to electrical conduits embedded in the floor (R4, tab 185). Tempo responded by letter dated 5 May 1986 asserting that under the circumstances of the work, these were the only practical tools for the "topping repairs." (R4, tab 188)

72. Tempo's position that the enforcement of the 1/8 inch in 10 feet tolerance requirement was the cause of extra work in levelling the concrete topping is contradicted by its own contemporaneous statements. In a letter to the contracting officer, dated 11 February 1986, opposing Mr. Reiley's recommendation of an Interim Unsatisfactory Performance Rating, Tempo stated that the "floor tolerance deficiencies are a direct result of the constructive acceleration," allegedly caused by restoration of the double wythe requirement, which "resulted in stacking of trades, learning curve problems, and productivity and quality problems due to lack of skilled manpower" (exh. AT-52).

73. The most reliable and credible record as to Tempo's work on the topping during the period 13 December 1985 – 18 August 1986 is afforded by the CQ reports, which appear to have been prepared with great care. The notations consist almost entirely of descriptions of particular work (*e.g.*, chipping, grinding, applying Lev-L-Astic compound) performed at particular locations in the buildings. Also noted are visits and

statements by Government personnel. There are no references whatever in the reports to the flatness tolerance or any indication that any of the work was performed at the direction of the Government.

74. The evidence of record does not support Tempo's claim that its work on the topping during the period 13 December 1985 – 18 August 1986 was performed pursuant to the Government's insistence on flatness within the 1/8" in 10' tolerance. The preponderance of the evidence, instead, shows, and we so find, that Tempo performed that work voluntarily in accordance with its own understanding of the work required in order to provide a proper substrate for installation of tile.

DECISION

Inasmuch as the work for which claim is made was performed in the ordinary course of contract performance and not pursuant to a Government direction amounting to a change order, as contended by Tempo, there is no basis for awarding additional compensation for the same. The denial of this claim was, therefore, correct.

Textured Ceiling Paint

FINDINGS OF FACT

75. The bottoms of the precast concrete floor planks served as the ceilings of the rooms below. The Painting Schedule insection 9P2 ("Painting General") of the specifications "prescribes the surfaces to be painted, required surface preparation, and the number and types of coats of paint." Among the entries in the Schedule is the following:

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Surface	Surface Preparation	1st Coat	2nd Coat	3rd Coat
Interior Ceilings in areas as scheduled	As previously specified	TT-C555B, Type I	None	None

76. The designation "TT-C-555B" above refers to the Federal Specification for "Coating, Textured (for Interior and Exterior Masonry Surfaces)." "Type I" refers to the version of that paint for interior application. Section 3 ("Requirements"), Para. 3.1 ("Materials") of TT-C-555B contains the following:

> The manufacturer is given wide latitude in the selection of raw materials and process of manufacture, provided that the paint supplied meets the requirements of this specification. Materials shall be of the best quality used in good commercial practice and entirely suitable for the purpose intended under normal conditions of use. The coating shall . . . produce a rough finish which shall completely hide the substrate.

77. Section 9P2 requires, in subpara. 4.2, that "detailed application instructions . . . be furnished for textured coatings." Subpara. 4.6 required Tempo to furnish test reports showing that batches of paint in excess of 25 gallons met all specification requirements. These reports were not submitted for any of the three products submitted for use as TT-C-555B coatings.

78. Section 9P2, subpara. 4.4 ("Samples") provides that:

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> Upon notification by the Contractor that the material is at the site, a 1-quart sample of each batch . . . shall be taken by random selection from the sealed containers by the Contractor in the presence of a representative of the Contracting Officer.

79. Section 9P2, Para. 6 ("Quality Assurance Provisions") provides, in part, that:

> Materials will be approved based on test reports furnished, except where samples are tested, approval will be based on tests of samples.

80. The General Provisions of the contract contain the standard DAR 7-602.54 "Shop Drawings (1976 OCT)" clause which defines "shop drawings" as including descriptive literature, . . . performance and test data; and similar materials furnished by the Contractor to explain in detail specific portions of the work required by the contract." Pursuant to section 1C ("Requirements for Contractor Submittals") of the specification, shop drawings were to be approved at the CQC (Contractor Quality Control) level except for those "containing Contractor proposed contract deviations" which required contracting officer approval. The "Submittal Data" provisions of Section 9P2, Para. 18 required CQC review of all listed submittals including certificates of compliance, manufacturer's instructions, samples and test reports.

81. The "Approval Procedure for Shop Drawings" clause set forth in section 1C of the specifications provides, in part, that:

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> Delegation of this approval authority to Contractor Quality Control does not relieve the contractor from the obligation to conform to any contract requirement and will not prevent the Contracting Officer from requiring removal and replacement of construction not in contract conformance. Nor does it relieve the Contractor from the requirement to furnish "samples" for testing by the Government laboratory. . . .

82. On 16 August 1985, prior to making any material submittal thereof, Tempo began using a product of O'Brien Corp., the manufacturer of Fuller-O'Brien paints, as a textured paint for the ceilings pursuant to TT-C-555B. The product was initially applied to ceilings on the third floor of Building No. 2 (tr. 1/169-170). Painting with that product in that building continued into September 1985 (QC Report 4 Sept. 1985).

83. As of 8 September 1985, the Savannah District had received a sample of that product and had submitted the same to the Division Laboratory of the COE's Missouri River Division (MRD Laboratory) for testing. The sample was received by the MRD Laboratory on 24 September 1985 (exh. AT-44).

84. The Fuller-O'Brien product failed testing by the MRD Laboratory for conformity to TT-C-555B. The Laboratory's report (exh. AT-44) found that said product had failed to meet that specification in the single respect that the non-volatile vehicle content was 2.2 percent by weight, far short of the minimum 35 percent required by TT-C-555B.

85. Tempo was informed of the MRD test results on 15

October 1985. On 21 October 1985, Tempo directed the painting subcontractor, F.J. Wesley, to cease use of that paint and to provide compliant new material (R4, tab 115). Tempo suspended painting of the ceilings until it could locate a new supplier of a conforming product.

86. On 4 December 1985, prior to making any submittal therefor, Tempo began painting the ceilings with the product of another manufacturer. On 11 December 1985, Mr. Reiley notified Tempo that "resumption of painting operations cannot occur until the [paint] material and application recommendations have been submitted and the required inspections held" (R4, tab 119).

87. On 16 December 1985, Tempo made a submittal of a product identified on the transmittal form as "M.A.B. Paint TT-C-555B" (R4, tab 120). The data sheet included in the submittal, however, was for a product identified as "Muralo Tite Vinyl Waterproofing Paint." The data sheet also did not indicate whether the product complied with TT-C-555B.

88. After the discrepancy was pointed out to Tempo, it made another submittal, dated 27 December 1985, transmitting technical data, a certificate of compliance with TT-C-555B, and application instructions for a product of M.A. Bruder & Sons identified as "M.A.B. Acra-Lastic" (R4, tab 123). There was testimony from Tempo that this paint was the Muralo product originally submitted, marketed by Bruder under its own name (tr. 2/236-37). There being an absence of evidence to the contrary, we find that testimony to be fact. The product is hereinafter referred to as the Muralo paint.

89. A sample of the Muralo paint, furnished to the Government on or about 16 December 1985, was shipped to the

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MRD Laboratory for testing and received on 18 December 1985 (exh. AT-47). The test report (exh. AT-47), undated but issued approximately on 13 January 1986, found that the Muralo product failed to comply with TT-C-555B specification requirements as follows:

Characteristic	Specification Requirement	Sample Testing Result
Non-volatile vehicle (percent by weight of vehicle)	35 (minimum)	2.0
Total Solids (percent by weight of paint)	60 (minimum)	56
Dry Opacity (application rate-50 sq. ft. @ gal. contrast ratio)	.99 (minimum)	.98
Moisture Vapor Permeability (Permeance, metric perms)	.4 (minimum)	.02

90. At a meeting held at the site on 22 January 1986 between representatives or Tempo and the Government, a technical representative of Muralo asserted that the batch from which the sample had been drawn had been tested in its own laboratory for non-volatile vehicle and been found to contain 38 percent non-volatile vehicle — well in excess of the 35

percent minimum required by the TT-C-555B specification. Muralo, however, had used a test procedure for determining the amount of non-volatile vehicle that was different from ASTM Test Method D-2369 which was the procedure in effect under TT-C-555B for testing with respect to that characteristic. (R4, tab 128).

91. In a follow-up letter to Mr. Reiley, dated 23 January 1986 (exh. AT-48), Muralo stated that for testing a latex paint, such as the submitted product, its test procedure was more appropriate than that prescribed under TT-C-555B. Muralo's test procedure, however, is not described in the letter nor have the test reports, said to be attached, been furnished for the record. The letter contains a description of a test procedure employed on the submitted Muralo product but the same relates to an entirely different and distinct characteristic to be tested under TT-C-555B, namely, vehicle solids.

92. The same misunderstanding is to be found, also, in Muralo's letter to Mr. Reiley of 14 February 1986 stating that in conversations with MRD Laboratory it had been discovered that "all tests listed to determine the non-volatile vehicle were not followed." The document referred to as the basis for that statement is test method ASTM D-2698 which does not relate to non-volatile vehicle, but, rather to vehicle solids. (REA, Vol. 3, tab 10)

93. There is other evidence in the record that might be inconsistent with the low non-volatile vehicle value determined in the MRD Laboratory tests of the Muralo product. In a letter to Mr. Reiley, dated 27 January 1986 (exh. AT-49), Muralo states that:

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> [If] the material supplied contained only 2% non-volatile vehicle with dry solids of approximately 60%. . . . [t]he film would be very soft, powdery, and would crumble if touched. The adhesion to the surface would be poor at best. In general you would have no film integrity.
>
> What conditions exist on the job? The film is adhering tightly, it is very hard, it has great film integrity, and complete opacity where applied according to specifications.
>
> To remove a textured film with 2% non-volatile vehicle, you could run a wire brush over the surface, and the film would easily fall from the precast. To remove a textured film with approximately 38% non-volatile vehicle from the precast would be a very difficult proposition.

94. The record supports those statements to the extent that Tempo found it necessary to resort to sandblasting and chemical solvents in attempting to remove the applied Muralo paint pursuant to Mr. Reiley's direction of 10 February 1986 to "remove all nonconforming textured ceiling paint and replace it with material conforming to Fed. Spec. TT-C-555B" (R4, tab 135; tr. 1/178-79).

95. In its letter to Mr. Reiley of 23 January 1986, Muralo stated that a complete report of an independent laboratory on a sample of the batch tested by the MRD Laboratory would "be forwarded to your attention as soon as it is made available to us" (exh. AT-48). Said report was submitted with respect to only

one of the four characteristics that had failed testing, namely, moisture vapor permeability (finding 85). The report shows that the Muralo product passed as to this characteristic, testing at 2.7 perms, which exceeded the .4 (minimum) required by the TT-C-555B specification (exh. AT-60). Testing by the MRD Laboratory had found .02 perms.

96. On 4 February 1986, Tempo made its third textured paint TT-C-555B submittal. This was a product described as TT-C-555B Type I coating manufactured by the Stabler Paint Manufacturing Co. (R4, tab 133). On 24 February 1986, Tempo made a supplemental submittal consisting of application instructions and test reports for the Stabler product (R4, tab 141). The instructions stated that this was an oil-based paint and that one coat was to be applied on new precast and pre-stressed concrete surfaces, such as were present here. While the details are missing from the record, the Government concedes that this paint passed testing for conformity with Specification TT-C-555B (Gov't. post-hearing brief, 74). On 18 February 1986, Tempo began application of the Stabler product on the ceilings of the buildings, beginning at the third floor of Building No. 3 (QC Report 18 Feb. 1986).

97. *Application of Paint* — Specification section 9P2, Para. 12.1 provides in part that:

> Paint may be applied by brush, roller or spray . . . Paint shall be applied so [that] finished surfaces shall be free from runs, drops, ridges, waves, laps, brush marks, and variations in color, texture and finish. *Hiding shall be complete*. Each coat shall be applied as a film of uniform thickness.

(Emphasis added)

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98. Specification TT-C-555B contains the following pertinent provisions:

> 6.1.1 *Surface Preparation.* The surface must be clean, dry, and free of oil, grease . . . prior to coating application. . . . Porous masonry blocks should be filled with a filler coat such as TT-F-1098 . . . before coating application.
>
> 6.1.2 *Application.* Application of the coating covered by this specification may require skills and special spray equipment. Therefore it is advisable to engage an applicator known to be so qualified. Suppliers of the textured coating should be able to recommend an applicator experienced in the use of their products.

99. On 5 December 1985, prior to submittal of the Muralo paint for testing, a member of Mr. Reiley's staff observed pinholes on the concrete surfaces of ceilings of Building No. 2 showing through even after application of two coats of coating. By letter dated 10 December 1985 (R4, tab 117), Mr. Reiley notified Tempo of variations in texture and film thickness; incomplete hiding of, and inadequate correction of faults in, the surface of the underlying concrete; "runs, drips, and ridges" on the painted surfaces.

100. In addition, Tempo was applying that coating while the air or surface temperature was below 50°F., which was contrary to the manufacturer's instructions for the textured paints submitted (R4, tabs 120, 123). Surface temperatures below 50°F.

were noted on 9 and 10 December 1985 (R4, tab 117). Atmospheric and surface temperatures can greatly affect the properties of textured paint. Below 50°F., the flow and leveling capabilities of the paint are diminished, the effect becoming more severe as temperature falls. Application problems of the textured paint due to prevailing temperatures below 50°F. were observed by a Muralo technical representative at the site on or about 17 December 1985 (R4, tab 121; tr. 2/233).

101. A technical representative of Muralo visiting the site on 23 January 1986 and viewing the results of applying its product reported that "the appearance of the job was unacceptable." (Exh. AT-48). The primary basis for that conclusion was that the underlying concrete surface was visible through the single coat of paint that had been applied. This problem had been raised with Muralo, which recommended backrolling immediately after spray application of the single coat in order to spread the paint more evenly across the surface. If backrolling did not achieve adequate covering, a second coat of paint would be needed. (*Ibid.*) Consistent with that advice, the technical data issued by Muralo states that "one or two" coats may be required (R4, tab 122). The painting subcontractor, Wesley, did not, however, consistently backroll the sprayed paint (tr. 4/167). By letter to Tempo dated 30 January 1986, Mr. Reiley objected to "approximately one-half of the ceilings [having been] covered with what from all test results and other indications is an unacceptable paint" (REA, Vol 2, tab 10).

102. In a letter dated 10 February 1986, citing the Inspection clause of the contract, Mr. Reiley directed Tempo to "remove all nonconforming textured paint and replace it with material conforming to Fed. Spec. TT-C-555B" (R4, tab 135). The contracting officer, COL. Stanley G. Genega, who also then

commanded the Savannah District, confirmed the direction to Tempo in writing on 14 February 1986 (R4, tab 136). Tempo responded by letter of 13 February 1986 asserting that the direction was a constructive change inasmuch as the causes of the unsatisfactory ceiling paintwork were the fault of the Government in various enumerated respects. By way of compromise, however, Tempo offered that if the Government would accept the paintwork in its existing condition, Tempo would give a warranty to repaint any "problem areas" for a five-year period (R4, tab 138).

103. By letter dated 21 March 1986, COL. Genega, as contracting officer, accepted Tempo's offer of the warranty with the exception that areas not having a uniform surface application would be required to be repaired immediately. The letter closed with a rescission of his direction of 14 February 1986 to remove and replace all nonconforming paintwork. (R4, tab 142). Tempo intended to carry out its offer by furnishing a warranty issued by its subcontractor. Wesley, however, refused to give the warranty and, in the end, it was never furnished to the Government.

104. By letter of 28 March 1986, COL. Genega, as contracting officer, notified Tempo that inspection of the textured ceilings had shown the work to be unacceptable in that the coating had not been applied with backrolling in accordance with manufacturers' instructions and at the rate recommended by the manufacturer. Tempo was directed to apply one coat of TT-C-555B to those areas designated by Mr. Reiley.

105. The record contains a memorandum (R4, tab 60) and testimony (tr. 1/186-87) that LT. COL. Hines, the deputy commander of the Savannah District, told Mr. Kulfan on 19

March 1986 that the Muralo paint was "compliant." Whatever weight that evidence might otherwise deserve is dissipated by an inconsistent assertion in Mr. Kulfan's subsequent letter of 31 March 1986 to Wesley. In directing Wesley to provide the five-year warranty, Mr. Kulfan warned that "[f]ailure to do so may result in the Contracting Officer's rescission of his decision to allow the non-compliant paint to remain." (R4, tab 151)

106. The Government's dissatisfaction with paint application related mostly to the areas coated with the Muralo product. On 3 April 1986, Mr. Reiley wrote to Tempo that "[t]he ceilings covered with the [oil-based] TT-C-555B as manufactured by the Stabler Paint Co. are acceptable with very minor exceptions associated with application." Mr. Reiley stated that the "vast majority of coverage problems exist with the ceiling paint as supplied by [Muralo]" (R4, tab 155).

107. On 4 April 1986, Mr. Reiley delivered a list of rooms in which repainting was required. The accompanying descriptions indicate that the corrections typically consisted of repair of splotchy appearance, covering of visible patches, removal of overspray, remediation of inadequate coverage. (R4, tab 156). The final increment of painting of the ceilings (other than touch-up associated with final inspection) was accomplished during the period 8 April – 8 July 1986) (CQC reports, QAR reports). The record, however, does not identify the specific work performed on each occasion during that period.

108. The problem of pinholes showing through the coating that had been encountered with latex paint was not cured by resort to oil-based paint. Application of oil-based paint also tended to highlight surface imperfections which is characteristic of that type of paint (tr. 1/184). Tempo found that the appearance

of the ceilings after application of only one coat and backrolling was "horrible." As a result, multiple coats of oil-based paint had to be applied to all of the ceilings in all of the buildings. Building No. 2 received at least four coats. Part of Building No. 3 received three or four coats. The remainder of Building No. 3 and all of Building No. 1 received two coats. (Tr. 1/202-03, 5/72)

109. *Surface Finish of Precast Planks* — The finish on the surfaces to which ceiling paint would be applied is addressed as follows in Specification section 3D3 ("Precast Concrete Floor and Roof Units"), Para. 6:

> Surfaces that will be painted or exposed to view shall be smooth, free of form marks, and shall have surface blemishes filled and finished to match adjoining concrete in color and texture.

110. There is no evidence that in formulating its bid for the contract, Tempo addressed itself particularly to these provisions or made any interpretation of the terms thereof.

111. It is not normally possible to cast planks free of form marks. These must be removed subsequently through patching or grinding. In the precast industry, the term "smooth," (used in section 3D3, Para. 6 (finding 109) is a measure of planeness within specified tolerances (prefiled testimony of T.J. Gutt, at 3). The contract did not specify tolerances or the level of smoothness required.

112. Smoothness encompasses "varying degrees of texture depending on the context of its use" (Gutt, *supra*, at 4). It is

obtained after casting as a result of patching and grinding the surface. The highest level of smoothness is an architectural finish, which involves filling in all voids and grinding down all protrusions. This is not common for floor planks. It would be specified only in special situations such as food processing facilities where ceilings must be kept free of crevices in which bacteria-forming substances might lodge. (Tr. 3/232-36, 280, 281) The normal level of smoothness in precast floor planks requires correction of voids and protrusions exceeding ¼ inch (tr. 3/234).

113. In patching the planks, Tempo was not able to fully implement the requirement of specification section 3D3, Para. 6 (finding 109) for matching in color and texture with the adjoining concrete (tr. 1/218). Differences in age and composition of material preclude obtaining an exact match between the patch and the adjoining concrete (tr. 3/237). That match can be attained only after painting.

114. In painting surfaces that had been ground or patched, Tempo found it necessary to apply several coats of TT-C-555B paint because patches and surface imperfections remained visible after one coat of TT-C-555B paint. The parties agree that one coat of TT-C-555B would be insufficient to provide adequate hiding of the patches and imperfections (R4, tab 202; Gutt, *supra* at 4).

115. Additional coats of paint were also needed to compensate for differences in density of concrete in the planks. COE technical personnel noted that the concrete surfaces had smooth and porous areas with better paint coverage attained on the smooth areas than on the porous areas. The plank surfaces had highly porous areas alternating with less porous ones,

leading to the appearance of stripes down the length of the planks. (Exh. AT-50)

116. The precast planks supplied pursuant to the contract were the hollow core type, so named because rather than being solid, the interior of the planks consisted of a series of parallel tubular openings, running the length of the planks. The striping effect can be attributed to less dense concrete located above the hollow cores absorbing paint at a higher rate than surfaces above the more dense solid webs of the planks. (Gutt, *supra* at 4; tr. 3/215). The greater the rate of absorption, the less paint coverage obtained, leading to these differences in surface appearance. Differences in absorption rate also occur in areas of the surface that have undergone grinding to remove high spots or been patched for levelling of low spots. Uniformity of appearance can be obtained in these instances by applying a primer or filler to the surface prior to the finish coat. (*Supra.*)

117. Adequate hiding of pinholes, patches, and blemishes on the surfaces of the planks might have been achieved with one coat of TT-C-555B had that coating been preceded by application of block filler, such as that covered by Fed. Spec. TT-F-1098 ("Filler, Block, Solvent-Thinned, for Porous Surfaces (Concrete Block, Cinder Block, Stucco, Etc.,")) (tr. 5/74).

118. The Atlanta Prestressed brochure for Perma-Span products (exh. AT-240) contains the following suggested specification relating to painting:

> For complete paint coverage, a minimum of one coat of heavy bodied primer (similar to block filler) and one coat of sprayed on medium to heavy textured paint is recommended. . . .

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119. During performance of the 85-85 contract, neither Tempo nor the Government were satisfied with the coverage of the ceilings obtained with one coat of TT-C-555B coating. As an experiment, Tempo applied block filler to the ceiling of one of the living units prior to painting with TT-C-555B textured coating. The product was a smooth, uniform finish that covered over all of the pinholes and patches on the plank surface. (Tr. 5/74) Several coats of the TT-C-555B would have accomplished the same result (tr. 3/243).

120. The planks supplied by Atlanta Prestressed to Tempo for the 84-60 contract had a "standard" finish characterized by small holes, marks and protrusions and a rough texture (Gutt, *supra*, 4; R4, tab 202).

121. Prestressed Concrete Institute (PCI) publication MNL-116, titled "Manual for Quality Control for Plants and Production of Precast Prestressed Concrete Products," is among the publications listed in Para. 1 ("Applicable Publications") of section 3D3. Section C.3.5.3 ("Finishing Formed Surfaces") of Appendix A ("Commentary") of MNL-116 states the following:

> Unless special surface treatments are specified, minor irregularities and imperfections are to be expected in the surface of the precast element. . . . The transfer of these irregularities in the steel forms to the surface of the concrete cannot be avoided, nor can the resultant blemishes be rendered invisible by any remedial action. However, blemishes can (if necessary) be satisfactorily covered by application of various texture and spray-type coatings.

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122. During performance of the instant contract, Prestressed and Tempo complained of being required to perform surface finishing of planks in excess of the contract requirements, particularly in regard to patching. In a memorandum of 19 March 1986 to the Savannah District, Mr. Reiley stated that while it was his position that specification section 3D3, Para. 6 required a finish "so that one coat of TT-C-555B will provide an acceptable finish" he would have no objection "to any method which provides a sound repair coverable by the specified paint." (R4, tab 202).

123. As communicated to Tempo in Mr. Reiley's letter of 9 April 1986 (Trauner Report, tab 35), Savannah District agreed that: (a) the Standard Grade finish would be acceptable and (b) that Atlanta Prestressed would be permitted to patch blemishes in accordance with PCI standard practices "that will allow an acceptable finish *when covered with the specified coating*" (emphasis added).

124. *Pertinent Contract Modifications* — On 28 September 1988, subsequent to submittal of the claim document, the contracting officer unilaterally issued contract modification P00034 increasing the contract price and performance time by $45,162.19 and 58 days, respectively, for the following:

> [D]elay which resulted from suspension order which stopped the painting of barracks ceilings. (Receipt of suspension order by you on 1/29/86 to the lifting of that order by the Contracting Officer on 3/19/86)

125. The record underlying modification P00034 is very sparse. It consists, primarily, of testimony by Mr. John B.

Remion, Jr., the Claims Manager of the Savannah District, who had no personal knowledge of, or involvement in, the administration events during the construction period (tr. 6/250-51). He asserted that the modification was related to a suspension of painting work by the Government based on failure of paint testing by the MRD Laboratory. According to Mr. Remion, some of those test results were erroneous because as to certain tests, the paint was "inappropriate to be tested that way" (tr. 6/263). Neither the tests in question nor the alleged error are identified.

126. On 18 April 1992, the contracting officer issued unilateral contract modification P00039 purporting to rescind contract modification P00034 on the ground that a critical path method evaluation performed subsequent to modification P00034 "revealed that project completion was not delayed by the suspension in question" (R4, tab 86).

DECISION

Tempo claims first that the rejection of the Fuller-O'Brien and Muralo paints for nonconformity to Specification TT-C-555B was erroneous.

The Government had the burden of proof of establishing that these materials did not comply with the specification. *Southwest Welding & Mfg. Co. v. United States*, 413 F.2d 1167 (Ct. Cl. 1969). When the Government opted to make that showing with reports of testing by COE's MRD Laboratory, a presumption arose that the tests had been properly conducted and that the results were accurate. Tempo was then required to rebut the presumption with evidence either that the Government's test results were invalid or that testing conducted by Tempo showed the products to be in conformity with the

specification. Upon the production of such proof, the Government would be entitled to prevail as to the rejection only if a preponderance of the entire evidence showed nonconformity of the product to the specifications. *Air-O-Plastik Corp.*, GSBCA Nos. 4802, 4870 *et al.*, 81-2 BCA ¶ 15,338 at 75,967-68.

In the case of the Fuller-O'Brien product, the presumption became conclusive and noncompliance of the product thereby established upon Tempo's failure to produce any evidence challenging the MRD Laboratory test results. As to the Muralo product, Tempo presented evidence challenging two of the four failures to meet the specification found by the MRD Laboratory tests. Tempo was successful as to one of these, namely, moisture vapor permeability, producing independent laboratory test results, not rebutted by the Government, showing that the Muralo paint met and substantially exceeded the minimum value specified in TT-C-555B.

Tempo's evidence as to other characteristic, non-volatile vehicle percentage, was less substantial. It consisted, first, of narrative as to testing by the manufacturer of no probative value because it related to an entirely different characteristic, namely, vehicle solids. The test reports of the product required by the specification were not provided (finding 77). The complete reports of independent testing of the same batch delivered to the site that had been promised by the manufacturer also were not furnished (finding 95).

The only other evidence from Tempo relating to the non-volatile vehicle percentage of the Muralo product consists of actual experience with application thereof under this contract. The evidence is offered for the purpose of undermining the credibility of the MRD Laboratory test results by showing that

paint with the adhesion performance actually demonstrated could not have a non-volatile vehicle percentage as low as that found by the MRD Laboratory (findings 93, 94).

Very little weight, however, can be assigned to that evidence inasmuch as the specification requirement to be satisfied was not adhesion performance, but, rather, meeting a stated quantitative value. There is no evidence that the adhesion demonstrated was equivalent to any particular non-volatile vehicle percentage. Accordingly, on the preponderance of the entire evidence, we conclude that as to this characteristic, the Muralo product did not meet the TT-C-555B specification.

The Muralo product failed to comply with the TT-C-555B specification as to three characteristics. The rejection of that product by the Government was, therefore, correct.

Tempo contends that the issuance of unilateral contract modification P00034 was an admission by the Government that the MRD Laboratory tests showing failure of the Muralo paint to meet the TT-C-555B specification were improper and, instead, that said paint was in compliance with such specification (app. br. 42). The text of the modification says nothing about deficient paint testing (finding 124). The only evidence supporting Tempo's assertion is vague and inconclusive testimony of the Savannah District's Claims Manager, who had no role in, or personal knowledge of, that aspect of contract performance (finding 125). That evidence is not a sufficient basis for importing into the modification the meaning claimed by Tempo.

The other major element of Tempo's claim relates to application of paint on the ceilings. Tempo contends that the contract required the application of only one coat of TT-C-555B

as provided in the Painting Schedule of section 9P2 of the specification (finding 75). The Government, however, was dissatisfied with the appearance of the ceilings after only one coat and required Tempo to repaint them many times over with multiple coats of paint. Tempo asserts that under the contract, the Government agreed to accept the appearance of the ceilings resulting from one coat of paint. On that basis, all requirements for additional coats are claimed to be constructive changes.

Tempo's claim relates to work performed with the Fuller-O'Brien and Muralo paints as well as with the paint provided by the Stabler Co. which passed testing and began to be used in February, 1986. The Fuller-O'Brien and Muralo products were used prior to submittal or approval of samples as required by the specification (findings 82, 86). This encompassed the period 16 August 1985, the start of painting with the unsubmitted and unapproved Fuller-O'Brien product, through 13 January 1986, the date of notice of rejection of the Muralo product (findings 82, 89).

There can be no recovery by Tempo based on work performed with the Fuller-O'Brien and Muralo paints. The "Material and Workmanship (1964 JUN)" clause, DAR 7-602.9, included in the contract provides that materials used without otherwise required approval of samples "shall be at the risk of subsequent rejection." Under the "Inspection and Acceptance (1976 OCT)" clause of the contract, DAR 7-602.11, Tempo was obligated "without charge" to "replace any material . . . found . . . not to conform to the contract requirements." That provision precludes recovery of costs of, or associated with, application of the nonconforming paints.

While the Government wrote letters to Tempo noting defects

in the application of the Muralo paint, this occurred during December, 1985 contemporaneously with Mr. Reiley's written notice to Tempo that painting with that product could not proceed until material submittals had been made and required inspections held (findings 86, 99). Under these circumstances, Tempo could not reasonably have interpreted the letters addressing defects in the work as a waiver of the Government's right to reject the Muralo product for noncompliance with TT-C-555B. *Doyle Shirt Manufacturing Corp. v. United States*, 462 F.2d 1150, 1154 (Ct. Cl. 1972); *cf. General Motors Corp.*, ASBCA No. 15807, 72-1 BCA ¶ 9405 at 43,678

Under the terms of the "Material and Workmanship" clause, Tempo assumed the risk of performing work with unapproved materials that had been properly rejected by the Government for nonconformity with the specifications. *C.S.M. Construcoes Santos & Matos*, ASBCA No. 32775, 87-2 BCA ¶ 19,802; *Burn Construction Co.*, IBCA No. 1042-9-74, 78-2 BCA ¶ 13,405 at 65,539-40.

It is likely that Tempo did not realize that the risk being taken in proceeding with the unapproved paints included applying multiple coats of paint rather than the single coat of TT-C-555B specified in the Painting Schedule. That the specification may have been defective in that regard is immaterial to Tempo's rights here. The contract clauses do not limit the risks assumed in proceeding with nonconforming, unapproved material to those which were foreseeable at the time the decision was made. Making such a distinction would have the anomalous result of allowing the Government to reject the first coat of paint as nonconforming pursuant to the "Inspection and Acceptance" clause but requiring it to pay for other nonconforming coats that the contractor has applied.

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Multiple coats of the Stabler product were needed in order to obtain complete hiding of the substrate and "finished surfaces . . . free from runs, drops, ridges, wave, laps, brush marks, and variations in color, texture and finish" all as required by section 9P2, Para. 12.1 of the specifications. Some of the additional painting was needed to correct poor workmanship, such as splotchy appearance and overspray, and inadequate coverage (finding 106). Additional painting to correct defects was Tempo's obligation under the "Inspection and Acceptance" clause of the contract.

Some of the additional painting was required because of the inherent characteristics of the oil-based TT-C-555B paint supplied by Stabler whereby a single coat and backrolling left a "horrible" appearance (finding 107). Remedying that result was also Tempo's responsibility pursuant to the TT-C-555B specification. Section 3 of that specification grants the contractor "wide latitude in the selection of . . . materials and process of manufacture" with the objective that "[t]he coating shall . . . produce a rough finish which shall completely hide the substrate." The contract did not dictate the choice of oil-based paint over another latex-based paint. That was Tempo's right and responsibility. Accordingly, the costs of added work to obtain complete hiding attributable to the choice of oil-based paint were for its own account.

Some of the additional painting work, however, was the responsibility of the Government. Patching and grinding of the unpainted surface was necessary in order to obtain the finish required by section 3D3, Para. 6 (findings 109, 111). The single coat of TT-C-555B specified in the Painting Schedule to be applied to ceilings, was not sufficient, however, to completely hide patches as required by section 9P2, Para. 12.1 (finding 97).

At least two coats were needed in order to afford adequate hiding (finding 114).

Additional coats were also needed in order to hide variations in color left by the first coat in areas that had undergone grinding for surface finishing and variations in color caused by differing densities of concrete in hollow core precast planks — the type of plank called for in the contract shown in the drawings (findings 115-117).

In these circumstances, the Painting Schedule was defective in calling for merely one coat of TT-C-555B to be applied to the ceilings. At least two coats should have been specified in the light of the requirement for complete hiding. Tempo is entitled to an equitable adjustment in price for the increased costs of the additional coats of conforming TT-C-555B paint applied to meet that requirement. *Spiros Vasilatos Painting*, ASBCA No. 35065, 88-2 BCA ¶ 20,558.

The Government contends, however, that the need for additional coats of paint stemmed from Tempo's choice of a "porous concrete block-like plank rather than the smooth one required under the plank specification" (Gov't. main br. 89, 93). That contention does not accord with the facts. Smoothness was solely a matter of planeness of the surface (finding 111). There is no evidence that smoothness affected the amount of paint needed to provide the coverage required by the contract.

Control Tubing

127. Section 15A1 of the specification is titled "Air-Supply and Distribution System (For Air Conditioning System)." Para. 10, set forth in Part 2 ("Products") of Section 15A1, contains

requirements relating to Room Fan Coil Units, including the following:

> 10.1 Room Fan Coil Units: Fan coil units shall consist of tandem fabricated units or single units. . . . Each unit shall include . . . riser pipes and controls. . . . Field installation shall only require the connection of riser pipes below the floor, a single electrical connection and controls connection.
>
> * * *
>
> 10.1.12 Controls: Fan coil unit controls shall consist of a fan selector switch . . . and cooling controls shall consist of two (2) return air thermostats. . . . One thermostat shall be for control of the electric valve in the cooling mode and one thermostat shall be for control of the electric valve in the heating mode.

128. Para. 12 of Section 15A1 provides that automatic temperature controls "shall be electric, electronic, solid-state electronic, or pneumatic type, or a combination thereof." Tempo elected to provide pneumatic controls. Equipment and piping relating to pneumatic controls are addressed in Para. 12.10 of section 15A1 which provides, in pertinent part, as follows:

> Where pneumatic controls are furnished, an air compressor . . . shall be provided. . . . Compressor shall be of sufficient capacity

> to provide continuous control air. . . . Air lines for pneumatic controls shall be seamless copper tubing or non-metallic tubing. Piping shall be concealed except in mechanical rooms or areas where other piping is exposed. . . . Nonmetallic tubing shall be compounded from polyethylene . . . Nonmetallic tubing shall be run within adequately supported covered rigid metallic raceway or electric metallic tubing except as indicated. Tubing concealed in walls containing insulation, fill, or other packing materials shall be hard-drawn copper tubing or non-metallic tubing run in conduit. . . . Multi-tube instrument bundle may be used in place of a single tube where a number of tubes run to the same point.

129. Section 15V1 of the specifications is titled "Ventilation and Exhaust Systems." As set forth in Part 2 ("Products") thereof, section 15V1 is concerned with air moving devices (fans) and ancillary equipment such as dampers, diffusers, registers, and air heating coils. Part 3 of section 15V1, relating to installation of equipment, contains Para. 18.2, titled "Automatic Temperature Control System," which provides, in part, that:

> Tubing located in suspended ceiling spaces shall be contained in vinyl or polyethylene sheath or shall be run in conduit.

130. This claim relates to tubing associated with pneumatic temperature controls for the fan coil units. Tempo's mechanical subcontractor, Dick & Kirkman, subcontracted the supply and

installation of the temperature control system, including the pneumatic tubing, to Johnson Controls, Inc. (JCI). According to the daily QC reports, installation of the tubing began on 25 September 1985.

131. On or about 16 October 1985, Government personnel noted that certain lengths of installed nonmetallic tubing (also referred to as polyethylene tubing) had been run in polyethylene sheathing without encasement in metallic raceway or electric metallic tubing (both hereinafter collectively referred to as "EMT"). The record does not indicate the location of this segment. There is no indication in the record, however, that any of the pneumatic control tubing for the fan coil units had been, or was required to be, installed in suspended ceiling spaces.

132. The Government took the position that the installation was nonconforming because under its interpretation of the contract all nonmetallic tubing was required to be run encased in EMT. In quoting to Dick & Kirkman, JCI had interpreted the contract as permitting the use of sheathed nonmetallic tubing, without encasement in EMT, in the following circumstances: (1) lengths of nonmetallic tubing concealed in hollow walls; (2) lengths of bundled tubing; and (3) tubing run in the attics of the buildings.

133. By letter to Tempo dated 25 October 1985, Mr. Reiley interpreted the specifications as requiring that all polyethylene tubing be run in either EMT or in metal conduit and directed that the work be performed accordingly (R4, tab 193). After notifying Dick & Kirkman, that it considered the interpretation and direction to be erroneous, JCI proceeded to comply therewith. The work then performed included removing sheathed polyethylene tubing already installed in the attic and concealed

locations and replacing the same with polyethylene tubing run in EMT. After completion of the work, JCI submitted a request for added compensation in the amount of $25,883.64. That amount, plus mark-ups for overhead and profit, is included in Tempo's present claim.

DECISION

Tempo contends that the Government's insistence that all nonmetallic tubing be encased in EMT was erroneous inasmuch as installation of such tubing in polyethylene sheath only was sanctioned by sections 15V1 and 15H1 of the specification and by contract drawing M-13. We limit our consideration of that contention to section 15V1 which is the only document, of the three, to have been provided for the record.

The dispute relates to pneumatic tubing associated with control of the fan control units. On the basis of section 15V1, Para. 18.2, Tempo contends that enclosure of the tubing in polyethylene sheath was proper and permissible. Citing section 15A1, Para. 12.10, the Government asserts that the tubing was required to be run in EMT.

In order to determine which of the competing provisions is applicable, it is necessary to examine them in the context of the specification sections in which they are found and also in the context of the overall plan of the specification. *Algernon Blair*, ASBCA Nos. 22683, 23127, 82-2 BCA ¶ 15,833 at 78,461. When that is done, it is manifest that the controlling provision is section 15A1, Para. 12.10. Sections 15A1 and 15V1 are addressed to different and distinct elements of the mechanical systems for the buildings. Only section 15A1 addresses fan coil units. There is no mention whatever of this equipment in section 15V1.

Moreover, section 15A1, Para. 12.10 relates to the specific type of tubing in issue, namely, tubing for pneumatic temperature control, whereas section 15V1, Para. 18.2 appears to apply to tubing generally. To the extent that the competing provisions could be viewed as being in conflict, the principle of contract interpretation favoring specifically applicable terms over more general ones would give precedence to Para. 12.10 of section 15A1. *J.S. Alberici Construction Co.*, GSBCA No. 12386, 94-2 BCA ¶ 26,776

Section 15V1, Para. 18.2 has no application here, also, because it relates to installations of tubing in only one location, namely, suspended ceiling spaces, and there is no indication in the record that pneumatic control tubing for the fan coil units had been, or was required to be, installed in those spaces.

The assertion that encasing the tubing in sheathing should have been permitted as being reflective of industry practice is also without merit. There was no showing that resort to industry practice was needed in order to resolve an ambiguity in the specification provisions or to demonstrate that clear language in the specification meant something different than its ordinary meaning. *Gholson, Byars & Holmes Construction Co. v. United States*, 351 F.2d 987 (Ct. Cl. 1965). In the absence of such circumstances, the trade practice cannot overrule, or be substituted for, the requirements of the specification. *Snowbird Industries*, ASBCA No. 33027, 89-3 BCA ¶ 22,065 at 110,997

The denial of this claim was, accordingly, correct.

Appendix A

Mechanical/Electrical Quality Control

FINDINGS OF FACT

134. Para. e ("Quality Control Organization") of the "Contractor Quality Control" clause, contained in section 1C of the specifications, provides in part, as follows:

> (2) Personnel: A staff shall be maintained under the direction of the system manager to perform all QC [Quality Control] activities. The actual strength of the staff during any specific work period may vary to cover work phase needs, shifts, and rates of placement. . . . The electrical and mechanical assistants shall:
>
> * * *
>
> (iii) Have no other assigned duties;
>
> (iv) Be physically present at the construction site during all major electrical or mechanical aspects of the work to include but not be limited to installation, testing and balancing, start-up, [and] check-outs. . . .

135. By letter of 11 July 1984, Tempo informed the COE Area Engineer that under its interpretation of the foregoing provisions, mechanical and electrical quality control personnel were to be present at the site only on an "as needed" part-time basis (R4, tab 198). Mr. Reiley responded by letter dated 18

July 1984 taking the position that "[w]henever mechanical/electrical work is being performed, the mechanical/electrical assistant is to be physically present at the construction site on a full time basis" (R4, tab 199).

136. Tempo thereafter notified the Government that it considered Mr. Reiley's interpretation to be in excess of contract requirements and, thus, constituted a constructive change order. On 10 October 1984, Tempo submitted a written demand for additional compensation in the amount of $24,664 by reason of that interpretation and demanded a contracting officer's decision on the matter (R4, tab 200).

137. Pursuant to contract modification P00030, issued unilaterally by the contracting officer on 16 April 1987, the Government increased the contract price in the amount of $14,872 to compensate Tempo "for providing all necessary labor to provide full time quality control for the electrical and mechanical aspects of the work" (R4, tab 79).

DECISION

The only dispute here relates to quantum of equitable adjustment. The contracting officer acknowledged that the direction went beyond contract requirements by issuing modification P00030 granting a price increase for the additional services ordered. The Government has adhered to that position in this appeal (Gov't. br. 121).

Appendix A

Extended Performance Period

Claims for Delay Costs and Recoupment of Liquidated Damages

FINDINGS OF FACT

138. The completion date in the contract, 14 July 1985, was extended for a total of 81 days bilaterally pursuant to contract modifications P00001, P00006, P00009, and P00020. Pursuant to modifications P00031 and P00033, the contracting officer unilaterally allowed 27 additional days. The total of 108 days allowed by the above actions served to extend the completion date of the contract to 30 October 1985.

139. Tempo seeks to recover added costs incurred in connection with the delay in completion of the contract until 23 October 1986 (R4, tab 7), when the entire project was declared substantially complete, on the ground that the delay was caused by acts and omissions of the Government relating to painting of the ceilings of the buildings (app. br. 98-99) (findings 75-126). The basis on which we dispose of this claim makes it unnecessary make findings of fact as to that contention.

140. The record contains a chart, compiled from data in the daily reports prepared and filed during the contract by the Government and Tempo (R4, tab 69, exh. 1), showing work that was being performed during that period of delay. Tempo has not challenged or disputed the accuracy of any such entries on the chart. The chart shows that during that period, Tempo was occupied with work, other than painting, required for completion of the contract.

141. Repair of the wardrobe doors took up the largest portion of that period. That work, consisting of adjustment of the hinges, sanding and varnishing of the doors, removal and repair of defective doors, and re-hanging the doors, began on or about 25 November 1985 and continued until approximately 26 September 1986, following which Tempo was engaged in punch-list work which consumed the remaining time until 23 October 1986. Another activity pursued by Tempo during that period was chipping and levelling of the topping and laying of vinyl tile which was performed during the period 12 February – 22 July 1986.

142. The contract provided for liquidated damages to be paid by Tempo for late completion of the contract. Tempo seeks a refund of $282,797.16 withheld for liquidated damages. The Government seeks the return of $60,436 in liquidated damages refunded to Tempo in connection with the 58 day time extension granted by modification P00034 and revoked by modification P00039 (findings 125, 126).

143. The liquidated damages rate in the contract, as awarded, was $1,042 per calendar day. On 20 August 1986, the parties entered into a Joint Occupancy Agreement allowing the Government to take possession of individual buildings and facilities. In connection with that arrangement, the daily liquidated damages rate was apportioned among the buildings and facilities, so that the daily rate would be reduced as possession was taken. Pursuant to that arrangement, the daily rate was reduced to $625.20 for the period 21 August – 14 September 1986 and further reduced to $312.60 for the period 15 August – 23 October 1986.

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DECISION

Even if we could find as fact that the completion of the contract had been delayed from 30 October 1985 until 23 October 1986 by the events relating to painting of the ceilings, the record shows that this entire period was needed for performance of other, unrelated work for which Tempo was responsible and which was required for completion of the contract. Inasmuch as Tempo would have incurred the added expense of prolonged contract performance by reason of such work regardless of the events relating to painting of the ceilings, those events were not the proximate cause of that expense and the same, accordingly, is not recoverable. *Sage Construction Co.*, ASBCA No. 34284, 90-1 BCA ¶ 22,576 at 113,299, *aff'd on reconsid.*, 90-2 BCA ¶ 22,726.

During the period 30 October 1985 – 23 October 1986, however, Tempo performed extra painting work to provide complete hiding of surface imperfections on the ceilings for which it is due equitable adjustment in the contract price. While any delay costs associated with that extra work are not compensable for the reason stated above, Tempo is entitled to be relieved of liquidated damages liability for the period of performance of that work. *Titan Pacific Construction Corp.*, ASBCA No. 24148 *et al.*, 87-1 BCA ¶ 19,626 at 99,353; *summary judgment granted* 17 Cl. Ct. 630 (1989), *aff'd*, 899 F.2d 1227 (Fed. Cir. 1990).

The record is very sparse in this regard. Tempo began applying the Stabler paint, the first product conforming to TT-C-555B, on 18 February 1986 (finding 96). The first subsequent indication of a Government direction to provide better hiding of surface imperfections is contained in Mr. Reiley's letter of

4 April 1986 seeking correction, *inter alia*, of visible patches and inadequate coverage.

We surmise that the corrective work was accomplished during the period 8 April – 8 July 1986, which was the next ensuing period of work on the ceilings. Some of that work was for correction of defects that was Tempo's responsibility. (Finding 107) The record does not contain the detail that would allow us to determine whether a given day's work at a particular location was extra work or Tempo-responsible defect correction, or both. In that state of the record, we cannot rule out the possibility that on some number of days during that period, work in these two categories was performed concurrently at various locations. Liquidated damages are not assessable for periods of such concurrent delay. *Acme Process Equiument Co. v. United States*, 347 F.2d 509 (Ct. Cl. 1965), *rev'd on other grounds*, 385 U.S. 138 (1966). The Government, however, would be entitled to recover liquidated damages for any non-concurrent delay attributable to Tempo-responsible defect correction. *Southwest Engineering Co. v. United States*, 341 F.2d 998, 1000 (8th. Cir. 1965).

As the party asserting the claim for liquidated damages, the Government had the burden of showing any periods of non-concurrent delay. No such evidence has been adduced. Lacking the same, there is no basis of charging Tempo with liquidated damages for any portion of the 91 day corrective work period. Accordingly, for the purpose of liquidated damages assessment, the completion date of the contract is extended by 91 days from 30 October 1985 to 9 January 1986.

Appendix A

Contract No. DACA21-85-C-0085

ASBCA No. 37681

Contract Award & Nature of Work

144. This firm, fixed-price construction contract resulted from a sealed bid solicitation issued on 20 June 1985 by the Savannah District, U.S. Army Corps of Engineers. The contract was awarded to Tempo on 26 September 1985 at the price of $13,349,000 with completion of work required within 540 calendar days after receipt of notice to proceed. Tempo received that notice on 27 September 1985, thereby establishing 21 March 1987 as the original contract completion date. The contract contains the clauses required by FAR and DFARS to be inserted in fixed-price construction contracts. These include "Changes (APR 1984)" (FAR 52.236-2); "Material and Workmanship (APR 1984) (FAR 52.236-5); "Specifications and Drawings for Construction (APR 1984)" (FAR 52.236-21); "Suspension of Work (APR 1984)" (FAR 52.212-12); "Shop Drawings (OCT 1976)" (DFARS 52.236-7003); and "Contract Drawings, Maps and Specifications (JAN 1965)" (DFARS 52.236-7002).

145. The contract work consisted primarily of construction of five free-standing barracks buildings, each structure being three stories high with two single-story company administration and supply (CAS) wings. The barracks buildings were comprised largely of living units, 82 such units in Barracks A, D and E and 70 each in Barracks B and C. The other major component of the contract work was site preparation and development, including demolition of existing barracks and other structures, storm drainage, paving, utilities and landscaping. The primary features of the buildings were concrete masonry load bearing and non-

load bearing walls, precast concrete plank floors covered with concrete topping, and a brick and glass exterior veneer.

146. By letter dated 20 January 1988, Tempo submitted a claim for a price increase in the amount of $2,628,953 for increased costs of added work, disruption, extended overhead costs of delayed contract completion, and reimbursement of money withheld from contract payments for liquidated damages. A time extension of 189 days was also sought. The claim document was accompanied by a certification of the claim pursuant to the Contract Disputes Act (CDA) signed by Tempo's president. On 15 July 1988, the contracting officer issued a written decision on Tempo's submission pursuant to the CDA. Certain of the added work claims were found meritorious. Unilateral contract modifications allowing price and performance relief as to these were subsequently issued. All other claims were denied. A timely appeal to the Board followed.

Joint and Masonry Reinforcement

147. On 24 June 1986, the Government's inspector noted that Tempo was using stirrups (also referred to as box ties) for connection of intersecting exterior walls of the buildings. In a letter to Tempo dated 26 June 1986 (R4, tab 38), Mr. Reiley took the position that the factory-fabricated joint reinforcement tees, rather than the stirrups, were the proper material for those connections and directed Tempo to immediately "correct the deficiencies." Tempo had installed joint reinforcement in the CMU walls in every other course of block as shown in contract drawing A-2. It had not, however, extended that installation to wall intersections. The masonry subcontractor, Phifer-Goodwin Construction Co., was able to secure a supply of the joint reinforcement tees in time to install them in new work beginning

on the next day, 27 June 1986. Prior to that direction, stirrups had been installed in all five buildings (tr. 9/199).

148. Tempo contends that the use of the stirrups complied with the specification and seeks to recover the added cost of complying with the direction to substitute joint reinforcement tees. Tempo relies for its position on the following provisions of Specification section 4M2 ("Reinforced Masonry"):

> 14. INSTALLATION:
>
> * * *
>
> 14.2 Reinforced Hollow Unit Masonry: Reinforced hollow unit masonry shall consist of hollow concrete masonry units reinforced vertically and horizontally with steel bars located within cells or kerfs in the units and with cells containing reinforcing bars filled solidly with grout. . . . Units shall be masonry bonded at wall corners. *Intersections shall be anchored by reinforcing bars or stirrups as indicated.*

(Emphasis added)

149. The contract contains the "Specifications for Construction (APR 1984)" clause, FAR 52.236-21. Para. (c) of the clause contains the following:

> Where "as shown", "*as indicated*", "as detailed" or words of similar import are used, it shall be understood that reference is made

> to the drawings accompanying this contract unless stated otherwise.

(Emphasis added)

150. The contract drawings do not depict reinforcement of walls at intersections. They contain a "Typical Wall Reinforcing Detail" for exterior walls at Detail No. 3 on contract drawing S-5, which states that #4 reinforcing bars are to be used to anchor the walls. That detail also applies to anchoring interior walls pursuant to section 9 of contract drawing S-9. (Tr. 7/107-10)

151. Mr. Reiley's direction to substitute tees for the box ties/stirrups was based on the following provisions of specification Section 4M2:

> 14. INSTALLATION:
>
> * * *
>
> 14.2.4 Joint Reinforcement: Place joint reinforcement so that longitudinal wires are fully embedded in the face shell mortar bed for their entire length. Provide a . . . mortar cover over longitudinal wires. . . . Lap reinforcement for at least 6 inches for deformed longitudinal wires and at least 12 inches for smooth longitudinal wires. *Install factory-fabricated sections at corners and wall intersections.*

(Emphasis added)

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152. Paras. 14.2 and 14.2.4, quoted above, are concerned with separate and distinct requirements for reinforcement of masonry walls. Para. 14.2, supplemented by certain of the structural drawings, notably drawing S-5, addresses reinforcement of the wall generally (tr. 7/60, -189). Para. 14.2.4 is concerned with horizontal reinforcement of wall joints in order to resist shrinkage stresses that occur in the masonry wall incident to the curing of materials. Horizontal joint reinforcement distributes those stresses over a wider area, thereby minimizing cracking of the walls. (Tr. 7/48)

153. The materials to be used in reinforcement are also separately treated in Specification section 4M2. Materials for wall reinforcement generally are described in Para. 8.5 ("Anchors, Ties, and Centering Devices") *et seq.* Materials for horizontal joint reinforcement are addressed in Para. 8.16 ("Horizontal Joint Reinforcement") *et seq.* Section 4M2 also contains separate requirements for submittal of material samples.

154. Para. 5.1.a requires submittal for approval of two of each type of anchors and ties to be used. Para. 5.1.d requires submittal of one piece of each type of horizontal joint reinforcement "including corner and wall intersection pieces." Pursuant to those provisions, on 3 March 1986, Tempo submitted samples of ties and anchors and of six types of joint reinforcement, including 8" corner and tee pieces (R4, tab 35). We cannot determine from this record whether Tempo actually installed anchors and ties at wall intersections in addition to the stirrups.

155. The stirrups supplied by Tempo did not meet the configuration requirements of the contract for joint reinforcement and, therefore could not be substituted for that material at those locations.

156. First, the stirrups were rectangular. That shape would not allow compliance with the requirements of section 4M2, Para. 14.2.4 above for installation of factory-fabricated sections "at corners and wall intersections." "L" and "T" shaped pieces are intended and factory-fabricated for use at these locations. (Tr. 7/45-46) Secondly, the stirrups were fabricated with a single cross bar (exh. AT-116; tr. 2/99). This did not meet the requirements for joint reinforcement. Para. 8.16.4.1, relating to the single wythe block partition walls, required that the reinforcement be "ladder or truss design." Para. 8.16.4.2, relating to double wythe faced construction (*i.e.*, exterior block walls faced with brick veneer), required that the reinforcement be "ladder, truss, or x-brace design."

157. In addition, the 12 inches length of the stirrup was not sufficient to provide the 12 inches overlap of the horizontal joint reinforcement on the intersecting wall required by Para. 14.2.4 where, as here, the reinforcement material used was smooth longitudinal wire (tr. 7/43, 44-45).

158. The Government subsequently directed Tempo to install stirrups at wall intersections in order to correct a problem wholly unrelated to the requirement for joint reinforcement at such intersections. It was learned that the drawings contained a design error in that bond beams needed at the tops of non-load bearing partition walls to satisfy seismic criteria had been omitted. The solution, issued as a change order on 20 August 1986, was to provide structural equivalents to the bond beam. In the case of intersecting walls already constructed, Tempo was directed to install 3/16" x 14" box ties (referred to as "stirrups" in the attached Government drawing) in the upper three courses of block, lapping over the joint reinforcement in the intersecting walls. (Tr. 7/58-59)

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DECISION

Tempo asserts that it reasonably concluded from the specifications that stirrups could be used to connect walls at intersections. According to Tempo, both the physical characteristics prescribed for, and the purpose served by, joint reinforcement were satisfied by the stirrups. (App. br. 76) On that basis, Tempo contends that the direction to employ joint reinforcement tees and ells at wall intersections constituted a constructive change of the specifications.

Stirrups are mentioned in the specification in relation to wall reinforcement only. Wall reinforcement and joint reinforcement serve different purposes (finding 152). Section 4M2 treats wall and joint reinforcement separately with unique provisions for each. Materials and installation for joint reinforcement are found in Paras. 8.16 and 14.2.4, respectively (finding 153). The parallel provisions for wall reinforcement are contained in Paras. 8.5 and 14.2. (Findings 148-53)

Para. 14.2 of section 4M2 (finding 148) cannot support Tempo's position that the stirrups qualified as joint reinforcement. Under that provision, stirrups or reinforcing bars were to be used for anchoring wall intersections "as indicated," *i.e.*, as shown in the drawings. While the drawings do not address the anchoring of wall intersections specifically, they do contain a typical detail for CMU wall reinforcement, which is the subject matter of section 4M2, Para. 14.2. That detail specifies only reinforcing bars for use in anchoring walls. (Findings 148-150)

The absence of authorization for use of stirrups pursuant to Para. 14.2 would preclude their use for wall reinforcement but might allow their use for joint reinforcement if they complied

with the contract requirements for that material. The stirrups installed by Tempo, however, did not comply with such requirements in several respects (findings 155, 156) and, thus, could not be used as joint reinforcement. Tempo acknowledged that distinction at the outset by making separate wall and joint reinforcement submittals (finding 154).

Inasmuch as the stirrups provided by Tempo did not qualify as joint reinforcement under the specification, Mr. Reiley's direction for use of conforming material was proper and did not constitute a constructive change.

Precast Plank Bearing Surface

FINDINGS OF FACT

159. The contract drawings require that the first, second, and third floors of the multi-story sections of the buildings be constructed of six inches pre-stressed, precast, hollow-core flat slab units (also referred to as "planks") covered with a two-inch concrete topping (drawing S-6). Contract drawing S-9 ("Foundation Sections & Details"), at Detail 15, requires a minimum of three inches bearing of precast plank on CMU (block) wall. The term "bearing" refers to the portion of the plank length that rests on the wall.

160. Projecting from the tops of the CMU walls were ½ inch vertical reinforcing bars (rebar), secured in the centers of the blocks and located at 48-inch intervals on the first and second floors and at 56-inch intervals on the third floor (tr. 7/249), which were installed for wall reinforcement, as required by the contract. A rebar projecting from the block at the top of the wall might leave only one-half of the surface available for bearing a plank.

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161. Most of the planks on the project bore on eight-inch CMU walls at both ends. A rebar protruding from the center of an eight-inch CMU block at the top of the wall leaves a 3½ inch width for bearing a plank, which exceeded the minimum contract requirement. Where one end of the plank bore on a eight-inch CMU wall and the other on a six-inch CMU wall, the plank would be shifted so that it bore for three inches on the eight-inch CMU wall, leaving room for a 2½ inches bearing at the end resting on the six-inch CMU wall.

162. In computing an available bearing on six-inch CMU walls, it must be borne in mind that the actual width of the block is 5-5/8 inches (tr. 3/130). On this project, where both ends of the plank rested on six-inch CMU walls, the maximum bearing surface available, after taking into account one-half of the width of the rebar (*i.e.*, ¼ inch), was 2-9/16 inches. Considering that the amount of available surface might be further reduced by as much as ½-inch due to normal variance in the length of planks, a three inch bearing in that situation was not possible. Moreover, in that situation, a 2-½-inch bearing would be possible only by notching the end of the plank so as to fit around the protruding rebar. (Gutt pre-filed testimony, 6; tr. 3/245-49). In each living module, only two planks had both ends resting on six-inch walls (tr. 7/164). These were short planks — eight-feet six-inches in length — located in the area of the bathroom chases.

163. The planks were 26-inches wide. With rebars located at 48-inch and 56-inch intervals, some planks were not affected by that obstruction. Furthermore, there was the possibility of overcoming the obstruction by moving the piece aside so as to allow free passage of the plank (tr. 7/228-29).

164. Tempo had expected that some amount of notching

would be required as an incident of installing the planks. Mr. Kulfan testified that:

> [Y]ou have to remember that planks have a length tolerance; rebar, as a general rule, when you don't have centering clips right in the wall, has a placement tolerance. You take these things into consideration. . . . [I]n installing plank, its not unusual that something will be in the way; a conduit or something that'll require some notching. It's the degree of notching that's at issue here. . . .

(Tr. 2/165-66)

165. The contract contains the "Contract Drawings, Maps and Specifications (JAN 1965)" clause, DFARS 52.236-7002, which includes the following:

> (b) Omissions from the drawings and specifications or the misdescription of details of work which are manifestly necessary to carry out the intent of the drawings and specifications, *or which are customarily performed*, shall not relieve the Contractor from performing such omitted or misdescribed details of the work, but they shall be performed as if fully and correctly set forth and described in the drawings and specifications.

(Emphasis added)

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166. Notching is not favored in the industry and should be performed only by skilled specialty workmen (Gutt, *supra* at 7). Notching necessarily entails some loss of bearing inasmuch as a portion of the plank surface is removed. Tempo's contention, however, that a notched 2½-inch surface is equivalent in bearing to an unnotched two-inch surface (app. br. 58) is not supported by the record.

167. Tempo adduced expert testimony that for planks shorter than ten feet that bear on six-inch CMU walls, (such as those in the area of the bathroom chases) a two inch bearing would be structurally sound (Gutt, *supra*, 7). While the engineers at the Savannah District agreed that a two inch bearing might be sufficient from the standpoint of bearing strength and stress (tr. 7/70), they insisted on a 2½-inch minimum bearing because they were worried that with no more than a two-inch bearing, the plank would be resting on the face shell of the CMU block. The face shell was only 1-1/8 inch thick and, therefore, fragile (tr. 7/77). Allowing only a two-inch bearing would make reliability of structural support for the plank dependent upon the face shell which was the weakest part of the support surface (tr. 7/192).

168. The Government was worried that under some conditions of dynamic loading associated with a seismic event, the planks might shift, causing the face shells to crack, in turn, causing failure of plank support. A larger bearing surface which would place as much as possible of the plank over the inner cell of the CMU block, which was filled with concrete, rather than resting the plank primarily on the face shell, would mitigate the risk of failure. (Tr. 7/154-55, 175)

169. Prior to 21 May 1986, discussions had been held

between Tempo, Atlanta Prestressed, the subcontractor for fabrication and supply of the precast floor planks, and representatives of the Area Engineer, Mr. Reiley, concerning changes in the bearing requirement. By letter to Tempo of 2 May 1986, Mr Reiley stated that it would be acceptable to reduce the bearing for the "shorter planks" from 3-inches to 2½-inches if "that will solve your problem" (R4, tab 36).

170. In a letter to Tempo dated 21 May 1986, forwarded to Mr. Reiley on 27 May 1986, Atlanta Prestressed sought confirmation that changes in bearing, including not less than a two-inch bearing on six-inch CMU walls at bathroom chases, had been agreed to by the Government (exh. AT-129). On 16 June 1986, the COE Savannah District advised Mr. Reiley that a two-inch bearing was not adequate and that a 2½-inch bearing was the minimum needed (exh. AT-131).

171. On 28 July 1986, Mr. Reiley informed Tempo that the Government would insist on a 2½-inch minimum bearing for six-inch CMU walls. On 30 July 1986, however, Mr. Michael R. Smith, the Assistant Area Engineer, told Tempo that a two-inch bearing on those walls would be acceptable. That advice was retracted the next day and Tempo told that the 2½-inch bearing remained the position of the Government. (Tr. 6/187-88)

172. Tempo then proceeded to comply with that direction in setting planks in place. In some instances, it was necessary to cut a notch in the end of the plank in order to fit the plank around the rebar and obtain the 2½-inch bearing. Tempo seeks to recover the cost of this notching work. (Tr. 2/165)

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DECISION

A specification requirement for a minimum of three-inch bearing of planks on CMU walls was not possible of attainment in certain instances. Tempo requested that the requirement be changed to a minimum of two inches. Perceiving that a two-inch minimum bearing was too risky, the Government required that a minimum 2½-inch bearing be maintained. Tempo now seeks an equitable adjustment for added costs for notching the ends of planks in order to carry out that direction.

Citing testimony given by Mr. Kulfan that a certain amount of notching work was expected (finding 164), the Government contends that the effort that is the subject of this claim is part of the existing contract work pursuant to Para. (b) of the "Contract Drawings, Maps and Specifications" clause. The notching effort that Tempo had anticipated performing consisted essentially of adjustments required by field conditions. That type of work fairly comes within the meaning of "work customarily performed" which is included in the contract price under that clause. There is no evidence that Tempo knew or should have known that the specified 3" bearing might not be attainable in all instances. In that circumstance, there is no basis for including the notching required by the error in the drawings in the scope of that contract provision. *Jefferson Construction Corp.*, ASBCA No. 23732, 79-2 BCA ¶ 14,186

Citing testimony by Mr. Kulfan that a three-inch bearing on six-inch CMU walls was "impossible" of achievement, the Government contends that this was a patent ambiguity that should have been brought to its attention prior to bidding, so that the present claim is barred (Gov't. br. 225-26). We do not agree. The error affected only planks resting on six-inch CMU

walls which were the minority of bearing surfaces. The added work affected only those planks resting solely on six-inch CMU walls which were the minority of bearing surfaces. The added work affected only those planks resting solely on six-inch CMU walls and not all of those were subject to reduction of bearing as the result of the projecting rebars (finding 163). These circumstances cause the error to fall far short of the "patent and glaring" defect that evokes the duty to inquire. *Max Drill, Inc. v. United States*, 427 F.2d 1233, 1244 (Ct. Cl. 1970)

Tempo is entitled to an equitable adjustment for notching the planks to meet the 2½-inch bearing required by the Government.

Precast Plank Camber

FINDINGS OF FACT

173. The specification provisions relating to the precast planks are set forth in Section 3D3 ("Precast Concrete Floor and Roof Units"). Para. 6 of section 3D3 contains the following relevant text:

> FABRICATION [sic] of the units shall be for the design load conditions and spans indicated and for additional loads imposed by openings or support of the work of other trades. Design of the units and joints shall conform to ACI 318 ["Building Code Requirements for Reinforced Concrete"] and shall consider all loading and restrain [sic] conditions from initial fabrication to completion of the structure . . . Strength

> design shall be performed by structural analysis. Structural analysis, with detailed computations, shall be performed in accordance with ACI 318 and shall include evaluations of the effects of connections, holes, discontinuities, concentrated loads and joints.

174. The General Notes on contract drawing S-1 state that "prestressed hollow-core flat slab units shall be fabricated and erected in accordance with ACI and PCI [Precast Concrete Institute]."

175. Camber is a physical characteristic inherent in prestressed, precast concrete planks. It is defined as "the upward deflection which occurs in prestressed concrete flexural members due to net bending resulting from the combination of moments due to stressing forces, dead load and live load" (exh. AT-244, C6.3.1). Some amount of camber is needed in order to offset the deflection of the plank caused by the load imposed upon application of topping (tr. 3/275, 7/103).

176. Camber increases with the amount of reinforcement steel used in a plank. Long prestressed, precast concrete planks, such as the 25-feet planks required here by the drawings, that contain substantial steel reinforcement steel for structural support can be expected to show much more camber than the smaller, less heavily reinforced planks (8½-foot) also used. PCI recommends that a 1:40 ratio of thickness to length be applied in sizing planks. Thus, for the 6-inch thickness specified here, the plank length should not have exceeded 20-feet. A thickness of 8-inches would have been more appropriate for the 25-foot planks required here and would have resulted in less camber. (Tr. 3/264-70)

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177. The amount of expected camber can be reduced by adding prestressing strands to the plank (tr. 3/275). Shop drawings submitted for precast planks are generally accompanied by calculations from the manufacturer that permit computation of the amount of camber expected to be present.

178. The extent to which camber can be predicted and controlled is limited, however, as indicated by the following extract from the PCI "Design Handbook, Precast and Prestressed Concrete," which was used by the project architect-engineer (A-E) in designing the planks and the layout of the floors (tr. 7/204):

> There are many inherent variables that affect camber and deflection, such as concrete mix, storage method, time of release of prestress, time of erection and placement of superimposed loads, relative humidity, etc. *Because of this, calculated long-time values should never be considered any better than estimates.* Nonstructural components attached to members which could be affected by camber variations, such as partitions or folding doors, should be placed with adequate allowance for error. Calculation of topping quantities should also recognize the imprecision of camber calculations.
>
> It should also be recognized that camber of precast, prestressed members is a result of the placement of the strands needed to resist the design moments and service load stresses. It is not practicable to alter the forms

> of the members to produce a desired camber. Therefore, cambers should not be specified, but their inherent existence should be recognized.

(Emphasis in original) (Exh. AT-245, Para. 4.6) These factors can cause the amount of camber to vary among planks of the same size (tr. 3/272). There is no evidence in the record, however, as to the actual effect of these factors, if any, on the camber of the planks supplied for this contract.

179. In this claim, Tempo seeks to recover costs incurred to overcome the effects of camber experienced with the long (25-feet) planks. The camber on these planks persisted after application of topping. This made it necessary to apply additional topping at the ends to bring them up to the height of the center of the span so that the plank would meet the requirement of specification section 3D3, Para. 7.2 that the topping be "finished, suitable for the intended purpose, to true plane surfaces within a tolerance of 1/8 inch in 10 feet."

180. Without taking camber into account, the floors were eight-inches thick, consisting of the six-inch plank and two-inches of topping. The added thickness of topping changed elevations between floors with several consequences. First, shop drawings for fabrication of the steel stairways had to be redrawn and certain pieces already manufactured had to be remade because of the changes in elevation of the stairwells (REA, tab 51; tr. 2/168).

181. The added thickness also affected the erection of the exterior walls. Contract drawing A-11 shows a 2-feet 8-inches (32-inch) height from the top of the first floor window to the

bottom of the second floor window. Based on 8-inch thick floors, the exterior wall for that area would be built of 3 courses of CMU block fronted with 12 courses of brick. The increased height of the floors caused by the added thickness of topping resulted in the CMU block wall which rested on the floor also being higher.

182. For the long planks, this resulted in an added height of 1-5/8 inches in the CMU wall. The brick wall, however, did not rest on the floor and, thus was not affected by the added floor height. The number of brick courses could not be adjusted to accommodate the additional height of 1-5/8 inches in the CMU wall. In the end, the discrepancy between brick and CMU height was resolved by various methods including cutting down the CMU blocks in the first course resting on the floor and modifying brick joint thicknesses. (REA, tab 49; tr. 2/168).

183. The added floor thickness also effected the erection of block walls in the stair towers of the buildings. The blocks used here are referred to as "tiles" because they have smooth ceramic coatings on the side facing the building interior. The bottom course of tile was laid on the floor of the tower. To accommodate the increased floor height it was necessary to cut down the blocks in the bottom course of tile and also to increase the thickness of mortar joints in the next few courses in order to synchronize these with the joints in the other courses of tile in the tower walls. (REA, tab 49)

184. Pursuant to unilateral modification P00036, dated 24 May 1989, the contracting officer determined that Tempo was entitled to an equitable adjustment of price only in the amount of $18,157 for certain work resulting from the added floor thickness, namely, added tuck pointing to remedy gaps between

the top courses of non-load bearing CMU walls and the ceilings; thickened bed joints of brick masonry to accommodate necessary increased thickness of edges of floor topping; and cutting tiles at stair towers to accommodate masonry coursing. (Exh. AT-125)

185. The contract drawings contained layouts of the floors showing the sizes and locations of the individual planks (tr. 7/202-04). In some places, the drawings called for the installation of short (*e.g.*, 5-feet, 7-feet, 8-feet) planks with little or no camber next to long planks (*e.g.*, 24-feet, 25-feet, 27-feet) with significant camber (tr. 3/118). The PCI "Manual for the Design of Hollow Core Slabs" (REA, tab 15) contains the following relevant guidance:

> In the planning stages, consideration should be given to the causes of differential camber. . . . [J]oints between slabs of unequal spans . . . will create a potential differential camber problem. This must be recognized and dealt with in the design layout.

186. Tempo solved the differential camber problem generated by the layout in the contract drawings by shimming up the shorter planks and, in one instance, with the Government's approval, cutting a long plank into smaller pieces (tr. 3/118-19; exh. AT-142).

187. Tempo contends that the added tuck pointing performed to remedy gaps between the top courses of non-load bearing (NLB) CMU walls and the ceilings (finding 184) also delayed the start of erection of those walls in Building D from 12 December 1986 until 24 March 1987 resulting in a completion

delay of 102 days. Tempo claims a time extension of that duration and associated costs for delay. According to the report prepared by appellant's expert, Theodore Trauner, that delay was caused by two causes. The first was the alleged failure of the Government to issue an "approved solution" for closing that gap prior to 24 March 1987 (Trauner report, 87).

188. The weight of the evidence is contrary to that assertion. In a letter, dated 18 March 1987 to its masonry subcontractor, Phifer & Goodwin (R4, tab 16, encl. 40), Tempo states that it had previously devised and carried out a solution to that problem, approved by the Government, in Building A of the project. As the second cause of that delay, the report asserts that "there were no available crews to perform this work" (*supra*). No evidence in the record is cited, or has been found, to support that statement. Accordingly, the same cannot be found to be fact.

189. The alleged failure of the Government to issue an "approved solution" for closing the gaps between the top courses of NLB CMU walls and the ceilings is claimed to also have caused the late start and extended duration of interior painting in Building D. The scheduled start of painting in that building was delayed a period of 44 days from 9 June 1987 until 23 July 1987. The work itself, which began on 23 July 1987 and had a scheduled duration of 46 days, completing on 7 September 1987, was actually completed on 4 November 1987, 59 days later (Trauner report, 89). Tempo attributes the delay in performance of the painting to the circumstances that once the issue of closing the gaps was resolved, "nearly all areas requiring interior painting were ready for paint at the same time." This made it necessary to "spread [Tempo's] resources throughout the project," in turn, slowing the progress of painting in Building D. (*Supra*)

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190. Tempo's contentions as to the cause of the 103 day delay of start and performance of Building D painting are not supported by a preponderance of the evidence. The record shows that other factors were operative to delay both the start of Building D painting and its completion. First, Tempo did not consider it prudent to begin painting until window installation was complete (R4, tab 16 at 14). Window installation in Building D was not completed until 17 July 1987.

191. With regard to the painting work itself, the record shows that during the period 23 July–4 November 1987, Tempo was performing other architectural finishing activities in the buildings which would have slowed or delayed painting work. These included installation of wardrobes, doors and hardware, and vinyl flooring (Ockman pre-filed testimony, 83-84; R4, tab 18, exh. 1). Tempo claims a time extension of that duration and associated costs for delay. According to the Trauner report, that delay had two causes, both of which we have found to be unsupported by the record. (Trauner report, 87)

DECISION

Tempo contends that the Government knew or should have known that 25-feet long planks with 6-inch widths would result in high camber and failed to make provision therefor in the design of the buildings (app. br. 86-87). Tempo now seeks to recover for the added work attributable to changes in floor heights caused by increased topping thickness and the costs of the impact thereof on other work. Tempo points to the price adjustment granted in unilateral modification P00036 (finding 184) as an acknowledgement by the Government that the contract design was deficient in these respects.

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The Government characterizes modification P00036 as granting relief for inadequate detailing and dimensioning of certain interfaces on the contract drawings and does not concede that the design was defective in the large scope alleged by Tempo (Gov't. br. 205). In the Government's view, the problems encountered, and other additional work performed because of camber in the planks, were Tempo's responsibility pursuant to the performance requirements set out in section 3D3, Para. 6 of the specifications (finding 173) (Gov't. br. 206). The Government asserts, furthermore, that some amount of camber is inherent in, and was to be expected from the use of, precast planks and that Tempo has failed to show that the amount actually encountered exceeded that which was reasonably to be expected (Gov't. reply br. 131).

The problems arising from camber were not caused by a failure of Tempo to properly design the planks. These problems were proximately caused by matters outside of Tempo's control and outside the scope of its design responsibility under the specifications. These matters were: type of plank to be used (*i.e.*, hollow core), lengths, widths, and floor layout of the planks. All of these had been dictated by the Government in the contract drawings (findings 159, 176, 185). Unfortunately, the drawings specified an inappropriate thickness of 6-inches for the 25-feet long planks which resulted in a high amount of camber. A thickness of eight-inches would have been more appropriate for that length and would have resulted in less camber (finding 176).

The added thickness of topping at the ends of the planks, installed to overcome the higher camber so that the floor surfaces could meet the flatness requirements of Para. 7.2 of section 3D3, caused the floor heights to be higher than shown in the drawings, causing other dimensions dependent on those heights to be

incorrect, requiring adjustments and ensuing additional work (findings 181-83).

Admittedly, camber is difficult to predict with precision and can be affected by matters within the control of the plank supplier that are extraneous to width and length of the plank (findings 177, 178). There is no evidence, however, that these matters or acts or omissions of Tempo or the plank supplier relating to design or fabrication of the planks actually had any effect on camber of the planks.

The Government's position might have merit had the selection of plank lengths, widths and layout been left to Tempo. In that event, it is more likely that the risks and responsibilities of coping with camber in the design of the planks and other installations dependent on that characteristic would have belonged to Tempo under a performance specification such as Para. 6 of section 3D3. Having decided to supersede that responsibility with a design-type specification of the factors that control camber, the Government effectively took over that portion of the design and, coincidentally, assumed the cost and performance time consequences of that decision.

Tempo is entitled to an equitable adjustment under the Changes clause for increased costs resulting from the defective design of the 25-feet planks.

The record, however, does not support Tempo's contentions that delay in resolving the manner of correction of gaps between ceilings and the tops of NLB CMU walls delayed the start of NLB CMU walls and the start and performance of interior painting at Building D. Tempo's claims for time extension and delay costs are therefore denied.

Appendix A

Precast Plank Penetrations

FINDINGS OF FACT

192. Heating, ventilation, and air conditioning (HVAC) for the living units was provided by individual fan coil units (FCU). For adjoining living units, the FCU's were installed back to back on each side of the gypsum partition wall separating the units. Each FCU had temperature control and condensate drain lines. The FCU's were connected to three vertical pipes (also referred to as risers) servi[illegible]hat line of bedrooms.

193. Contract drawing A-11, detail 10 ("Fan Coil Detail") shows three floor openings labelled as openings for mechanical piping. The detail is stated to be scaled at 3/4-inch = 1-foot 0-inches. While the drawings made part of the contract are full scale, the copies furnished in the appeal file are half-size. According to Tempo, without real dispute from the Government, scaling off these openings on the full scale drawing indicates approximate two-inch openings, separated from each other by approximately two-inches of concrete (app. reply br. 76; Gov't. reply br. 124-25).

194. Contract drawing M-6, in a detail titled "Typical Bedroom Plan — Buildings A,B,C,D & E" shows 3 undimensioned floor openings (also referred to as "penetrations") located between the units for passage of the pipes between the floors. Also shown on Drawing M-6 are sections showing various dimensions and features relating to the FCU. One of these contains a direction to "pack floor opening around piping with glass fiber insulation & seal w[ith] fire rated sealant."

195. These floor openings were not shown in the structural

drawings. Drawing S-1 ("Location Plan, General Notes") states, however, that "the structural drawings shall be used in conjunction with all other drawings and contractor shall coordinate same."

196. The plank supplier, Atlanta Prestressed, was apparently unaware of these floor openings at the time of placement of the subcontract. This is indicated by the following portion of its letter to Tempo of 8 July 1986:

> [W]e were unaware of the substantial blackout required at midspan for mechanical penetrations and could not have determined this from the drawings. Without this knowledge, the Perma-Span plank would not have been capable of accommodating the cutout required.

(R4, tab 53)

197. Atlanta Prestressed's lack of knowledge continued through the period of design of the planks. This is indicated by the fact that the shop drawing submittals for the precast planks did not cover the drilling of the planks for these openings. There was no indication in the data submitted of any structural provision in the planks for the openings.

198. The floor openings for the FCU risers were located the outside walls of the buildings. According to the layout the contract drawings, the openings would be made in 42-inch wide planks (referred to as "full-width" planks). In the course of reviewing the layout, Atlanta Prestressed noted that at another location in the buildings, a full-width plank with a bevelled edge abutted a half-width (21-inch wide) plank with a saw-cut edge.

199. A ceiling joint of bevelled and saw-cut edges was not attractive. Being conscientious about the quality and appearance of its work, but without awareness of the need for floor openings for the FCU units, Atlanta Prestressed decided to relocate the half-width plank to the outside perimeter of the building where the saw-cut edge would be hidden by brick work. The full-width plank shown in the drawings at the outside location would be moved into the former location of the half-width plank resulting in a better-looking ceiling joint of two bevelled edges.

200. As of 19 May 1986, Atlanta Prestressed had become aware of the requirement for the FCU floor openings. It became concerned that the good aesthetic result achieved by switching the planks would give rise to a structural problem in connection with the floor openings. The openings would now be made in half-width planks. It was feared that the cuts of pre-stress strands resulting from the openings would cause the planks to fail. On 19 May 1986, it so advised Tempo. This advice is recorded in Atlanta Prestressed's letter to Tempo dated 22 May 1986 stating that "[i]n order to maintain sufficient load capacity, no prestressing strand may be cut in the [half-width] plank" (REA, tab 15).

201. Tempo responded to these warnings by stopping work on the floor openings and notifying the Government of the problem on 19 May 1986 by means of a written Request for Clarification (RFC). The COE Assistant Area Engineer responded in writing stating that it was Tempo's responsibility to design the planks for the required openings and inviting the submittal of a proposal for resolving the matter (exh. AT-147).

202. On 29 May 1986, Tempo proposed that the requirement for insulating the pipes in the floor opening be

waived. The insulation required an opening three-inches to four-inches wide (tr. 3/204). Omitting the insulation would reduce the opening to approximately 1½-inch, sufficient to avoid cutting prestressing strands (REA, tab 9).

203. Apparently as the result of that proposal, Mr. Reiley became aware of the absence of structural provision for the openings in Tempo's shop drawings. That prompted him to issue a written order on 3 June 1986, under the "Suspension of Work" clause of the contract, directing Tempo to:

> [S]uspend all work on the installation of precast concrete planks on subject contract. Once a structurally sound method of running . . . lines through the precast planks has been determined, fabrication and installation may continue.

(REA, tab 10) The record does not disclose any formal revocation of the suspension order. Tempo asserts, and the Government does not dispute, that the suspension ended no later than 1 July 1986 (Trauner report, 35).

204. The problem for the planks posed by the openings required two distinct solutions. Some of the half-width planks, primarily those in the first floor of Buildings A, C, and E, had already been installed such that removal and replacement with full-width planks was impracticable. As to these locations, the remedy proposed to the Government was the provision of additional support in the form of angle braces installed beneath the plank on both sides of the floor opening (R4, tab 58; tr. 2/185). By letter of 13 June 1986, Mr. Reiley concurred with that approach subject to the submission of detailed data certified

by a registered engineer (REA, tab 11). This data was submitted on 11 August 1986 (REA, tab 13).

205. Where half-width planks had not already been installed, the floor openings would be cut in full-width planks as shown in the contract drawings. Initially, Atlanta Prestressed had concerns about structural risks of cutting the openings in the full-width planks because, even without the openings, the design load for these long planks was close to their capacity.

206. The loads used by Atlanta Prestressed in designing the pre-stressed strand pattern for these planks, however, were greater than required by the contract. The design criteria given in drawing S-1 specified that the floors were to be designed for a maximum live load of 40 lbs. per square foot (p.s.f.). Atlanta Prestressed, however, had designed all planks with an additional 20 lbs. p.s.f. load allowance called for by the Standard Building Code to cover the contingency of partitions provided for in the contract but not finally located as of the time of plank design.

207. Atlanta Prestressed was directed by the Government to delete this allowance from its design inasmuch as final location of all partitions was shown in the contract drawings. (R4, tab 59) The deletion of that allowance made it possible for Atlanta Prestressed to employ a Prestressed strand pattern for the full-width planks that would accommodate the floor openings without impairing their load capacity (R4, tabs 53, 56).

208. The openings for the FCU piping were made by core drilling three round holes in a row resulting in a rectangular opening approximating 4-inches x 12-inches (Gutt, *supra* at 10). There is no evidence that making a single opening of that size was necessary as opposed to making three separate openings, shown in the drawings (finding 193).

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209. In the precast plank industry the practice is that openings (also referred to as "penetrations") less than three-inches across are made in the field by coring the plank. Openings that are more than eight-inches across are made in the plank at the time of fabrication and are sized and located on the contract drawings. The locus for making openings between three-inches and eight-inches and detailing them in the drawings is a matter of case-by-case engineering judgment. (Tr. 3/219-20; Gutt, *supra* at 112).

210. While the provisions of the specifications relating to the FCU's were not placed in the record, the record otherwise indicates that the Government did not direct the exact make and model to be furnished. Drawing A-11, detail 10 contains a note relating to certain dimensions of the FCU, that the contractor is to "confirm exact dimensions with equipment manufacturer."

211. The usual practice in circumstances where the contractor is charged with selecting the make and model of the equipment to be furnished is that the sizes of piping serving the unit is not known and, in turn, penetration dimensions are not known until the equipment is ordered by the contractor. The architect-engineer would, therefore, not usually possess such information definitively at the time of contract drawing preparation. (Tr. 3/257-58) There is no evidence as to whether Tempo made any interpretation of these indications on drawings A-11 and M-6 at the time of bid preparation.

DECISION

Tempo states its position on this claim as follows:

The Contract plainly showed that Tempo

> could expect to drill three small holes in the precast plank for mechanical piping. The precast plank manufacturer, in reliance on the Contract documents, placed a strand pattern in the plank which could be easily core drilled for these three small holes. When Tempo began installing the mechanical piping, it was immediately apparent that a large penetration would be required, that the large penetration would require cutting more than one strand, and that the structural integrity of the plank would thus be compromised.

(App. Reply to Gov't. Response br. 51-52)

It should be stated at the outset that the contract drawings were incorrect in showing two-inch openings for the FCU piping. The drawings required the floor openings around the piping to be packed with insulation (finding 194) which necessitated four-inch diameter openings (finding 202). Tempo, however, is incorrect in stating that a "large penetration" was required for the piping openings. The drawings showed three separate openings (finding 193). There is no evidence that the four-inch openings could not be effected as shown in the drawings, eliminating the single, large 7-inch x 14-inch opening made by Tempo. Lacking that evidence, we conclude that Tempo made the single large opening for its own convenience, and, therefore, is not entitled to compensation for added costs flowing from that decision.

Tempo is incorrect, also, in stating that the plank manufacturer, Atlanta Prestressed relied on the contract

documents in placing a strand pattern in the planks that would accommodate the three openings shown in the drawings. The record shows that Atlanta Prestressed Prestress did not obtain the information in the drawings relating to the openings until after the shop drawings had been prepared and installation of planks begun. Added costs incurred as a result of failure to provide needed information to Atlanta Prestressed in a timely and complete manner are for Tempo's account.

Because of Tempo's failure to provide timely information to Atlanta Prestressed, the shop drawings did not make structural provision for the FCU piping openings. Section 3D3, Para. 6 of the specifications required Tempo to perform "[s]tructural analysis, with detailed computations, . . . includ[ing] evaluations of the effects of . . . holes." (Finding 173) The failure to comply with that provision justified Mr. Reiley's order of 3 June 1986 suspending work on installation of planks until provision had been included in the working drawings for the penetrations (finding 203). Accordingly, Tempo is not entitled to time extensions and increased costs of the 28 days of completion delay claimed to have been caused by that order. While the drawings were incorrect in showing a two-inch opening rather than the four-inch opening required in order to accommodate the insulation (finding 202), the error did not cause extra expense inasmuch as Tempo elected to make a single large opening rather than individual openings for the piping. The claim is denied in its entirety.

Contract Completion Delays

FINDINGS OF FACT

—212. During the contract, time extensions totalling 73 days

were granted resulting in an adjusted completion date of 2 June 1987. The contract was actually completed 170 days later on 19 November 1987. The contract, as awarded, provided for liquidated damages for late completion at the rate of $1,322.79 per calendar day of delay. During the course of the contract, the parties entered into a joint occupancy agreement which included a provision reducing the daily rate in conjunction with occupancy of individual buildings being transferred to the Government. The following reduced rates of liquidated damages came into effect pursuant to that arrangement:

21–30 October 1987 ..... $793.20 per day
31 October – 19 November 1987 ..... $317.28 per day

213. Tempo asserts that the following are the "controlling" causes of completion delay that are the responsibility of the Government. Next to each are listed the relevant findings of fact herein:

a) Suspension of Notice to Proceed — finding 214.
b) Delayed start of demolition — findings 215-220.
c) Delayed start of precast work, Buildings B, D — finding 203.
d) Extended durations, LB CMU walls, Buildings B,D — finding 221.
e) Delayed start NLB CMU walls, Building D — findings 187, 188.
f) Delays of interior painting, Building D — findings 187-91.

We have found, *supra*, the Government was not responsible for the delays designated c, e, and f.

214. *Suspension of Notice to Proceed* — On 1 October 1985, subsequent to issuance of Notice to Proceed, the contracting officer notified Tempo that a protest against the award of the contract had been filed with the General Accounting Office (GAO) by another bidder. Pursuant to provisions of the Competition in Contracting Act (CICA), codified in 31 U.S.C. § 3553, the contracting officer directed Tempo to cease performance of the contract and suspend related activities. On 4 October 1985, he notified Tempo that the protest had been dismissed and that work should be resumed. The contract does not contain the "Protest After Award (AUG 1989)" clause, FAR 52.233-3.

215. *Delayed Start of Demolition* — Contract drawing P-7 contains the following notes:

> 1. All buildings shown to be demolished on Sheet P-6 will be burned by the Army prior to contract start. The contractor shall be responsible for removing any unburned debris including foundations.
>
> 2. The contractor shall be responsible for asbestos removal and demolition of all buildings shown to be demolished on Sheet P-5.

216. The Network Analysis (NAS) Chart, submitted by Tempo and approved by the Government, shows that demolition and asbestos removal were scheduled to begin on 29 September 1985. Tempo, however, was not ready to proceed on that date. The subcontract for site preparation, which included demolition required by the contract, was not awarded until 15 October 1985 (exh. AT-156).

Appendix A

217. During early October, 1985, the Government requested Tempo to postpone the start of demolition until 21 October 1985 to allow the salvage of material and equipment from the buildings for reuse elsewhere. Tempo acceded to that request. The agreement was memorialized in bilateral modification P00001 in which a 25 day extension of the contract completion date was granted.

218. The pre-construction conference for the contract was held on 15 October 1985. At the conference, the Government proposed to Tempo that the buildings to be demolished by Tempo under the contract be turned over, instead, to the Fort Bragg Fire Department to be burned as part of training exercises (tr. 4/231). Tempo was agreeable to that proposal so long as no delay of its performance would ensue (tr. 4/229, 5/109). That arrangement is reflected in the demolition section of the site preparation subcontract which states that "all buildings above foundations are to be burned by the [Government]." Debris removal from burning operations would be performed by the subcontractor. (Exh. AT-156)

219. Removal of asbestos from the buildings to be burned began on 31 October 1985 and was completed on 27 November 1985. During a meeting with Tempo on 15 November 1985, the Fire Department requested that Tempo assume responsibility for injury or death of persons involved in the training exercise of burning the buildings. Tempo was not willing to accept that responsibility.

220. On 5 December 1985, Tempo began reviewing new quotations for the demolition work. Crowell Construction, the site preparation subcontractor, could wait no longer for the start of demolition and had deployed those assets to other work. As

of 18 December 1985, the parties were still discussing the plan to burn the buildings. By 20 December 1985, however, that plan had been abandoned as indicated by documents, signed by Tempo and the new demolition subcontractor, Hood Construction Co., which envisioned demolition of the entire structures, not simply the foundations. The demolition work began on or about 24 December 1985 and completed on approximately 7 February 1986.

221. *Extended durations for Load Bearing (LB) CMU walls at Buildings B and D* — Tempo seeks a total of twelve days time extension and compensation for delay costs for increased duration of this work encompassing the periods 14–22 July 1986 and 5–9 September 1986 as the result of "Government-directed changes to Tempo's work" (Trauner report, 53) which are not further identified or described. The Government's expert as to scheduling asserts that this refers to the claim concerning joint and masonry reinforcement (findings 137-146) (R4, tab 18, III-22). No evidence in the record is cited for that statement, leaving us with no basis for finding the same to be fact.

DECISION

Suspension of Notice to Proceed and Delayed Start of Demolition

Tempo seeks a time extension and associated delay costs for the entire 92 day interval between the scheduled date for start of demolition, 29 September 1985, and its actual starting date, 30 December 1985. The stop work order, however, was issued pursuant to the mandate of CICA upon receipt of the protest of award. Such an order is deemed a sovereign act and, as such, cannot serve as the basis for liability of the Government

for the consequences thereof. *Port Arthur Towing Co.*, ASBCA No. 37516, 90-2 BCA ¶ 22,857; *aff'd*, *Port Arthur Towing Company v. Department of Defense*, Civ. No. 90-1889, U.S.D.C.D.C., order dated July 9, 1991.

The three day CICA suspension delay in completion of the contract qualifies, however, for an extension of time under the Default clause, FAR 52.249-10, which includes, among the excusable causes, "acts of the Government in either its sovereign or contractual capacity."

While the Government may have been at fault in not stating at the outset that it wanted Tempo to assume the risk of injury and death to participants in the burning of the buildings, Tempo was not prejudiced thereby. Tempo was told of that condition on 15 November 1985 while asbestos removal was still in progress.

The condition was immediately unacceptable to Tempo. At that juncture, there were still two weeks remaining for completion of asbestos removal. That was enough time for Tempo to tell the Government that the proposal for burning was unacceptable and to arrange for beginning demolition of the buildings in accordance with the contract requirements as soon as asbestos removal was completed. That course of action would have avoided the delay associated with that proposal for which claim is now made.

Instead of taking that action, Tempo allowed the matter to drift until 20 December 1985 when the proposal was abandoned and demolition initiated. The delay in the commencement of demolition associated with the proposal to burn the buildings was proximately caused by Tempo's failure to exercise

reasonable care and judgment in managing the contract. As such, it is not excusable or compensable.

Extended durations for LB CMU walls at Buildings B and D — Tempo has failed to prove the fundamental facts concerning causation of the delay and liability of the Government therefor. Accordingly, it is not entitled to the claimed time and cost adjustment.

ASBCA No. 38576 (Haul Route Claim)

FINDINGS OF FACT

222. Section H ("Special Contract Requirements"), Para. 2 ("Haul Routes") provides in part as follows:

> The Contractor will be required to use the haul routes shown on the plans unless otherwise permitted in writing by the Contracting Officer. . . . The Contractor shall maintain the haul routes and shall keep the dust problem under control by wetting the surface as needed. . . . The cost of maintenance and repair of the haul routes, as mentioned above, shall be considered as a subsidiary obligation of the contractor.

223. Drawing P-1 of Contract 85-85, as awarded, showed two locations for disposal of demolition debris and excess soil from excavation. Haul routes to both locations were shown with dotted lines on drawing P-1. One location, northwest of the building site was designated for "Spoil and Construction." The location for disposal of those materials was changed by change

order issued on 31 December 1985, subsequently incorporated in bilateral contract modification P00001. The Government and Tempo personnel drove on this road together on 23 December 1985 (QC Report, 23 December 1985). There is no dispute as to this road.

224. The other location, southeast of the construction site, in the vicinity of Simmons Army Air Field ("Simmons") was designated as a "Spoil Area." The haul route shown on drawing P-1 followed Murchison Road (NC Highway 210) south to the edge of the Fort Bragg Military Reservation. At that point, the haul route crossed the Seaboard CoastLine Railroad tracks that ran generally parallel to NC 210 and continued for a distance to the spoil area.

225. The path of the last section of the haul route is marked with the dotted line but not indicated on the drawing as being an existing road. Mr. Kulfan, Tempo's vice president testified that he drove on it during a pre-bid site visit and remembered it as a two-lane gravel road (tr. 2/78-79). Mr. Paul L. Smith, Tempo's Quality Control Manager, who had driven the route early during the contract, testified essentially to the same effect (tr. 3/101). Appellant bid intending to use that road.

226. Without specifying the basis of his testimony, Mr. Reiley testified that at the time of award of the 85-85 contract, the last section of the haul route was a two-track dirt road. He agreed that there was a gravel road near the spoil area but asserted that the same had been built in early 1986, subsequent to award of this contract, by ACS Construction Co. under a separate contract for construction of helicopter hangars and aprons in the section of Simmons near the spoil area. (Tr. 6/24-25, 133-34). According to Mr. Smith, however, the gravel road

described by Mr. Reiley was different from that forming part of the haul route at the beginning of the contract. Mr. Smith testified the original gravel road had been demolished by ACS in connection with work under that contract (tr. 3/102). We find the testimony of Messrs. Kulfan and Smith based on personal observation in connection with this contract to be more persuasive than that of Mr. Reiley and we find the facts accordingly.

227. On or about 10 January 1986, the Government informed Tempo that the haul route for this location needed to be changed because it was in a "security area" (tr. 2/83). A security fence was being erected by ACS across the gravel road section of the haul route. Traffic to the spoil area was diverted through a gate in the fence manned by ACS onto a single lane dirt road leading to the spoil area (tr. 4/194-95).

228. The dirt road caused expense to Tempo that would not have been incurred with use of the gravel road. The dirt road had to be periodically regraded because of damage from the passage of heavily-laden trucks on the way to the spoil area. The road had to be widened in several places to permit trucks to pass in opposite directions. (Tr. 4/194-95, 3/102-03) In the hot, dry summer weather, the dirt road needed much more watering to reduce dust in the air than would have been required for a gravel road (tr. 3/103-05).

229. ACS's hours for manning the gate did not always coincide with Tempo's needs with the result that Tempo's trucks, bound to and from the spoil area, were occasionally locked in, locked out, or delayed awaiting the opening of the gate (tr. 2/86, 4/195). In order to resolve this problem, Tempo hired, or reimbursed ACS for the cost of, a guard to man the gate for the

additional hours needed to get Tempo's trucks in and out of the gate (tr. 3/106; QC Reports 11, 12, 13 March 1986).

230. The contract contains the standard "Other Contracts (1964 JUN)" clause (DAR 7-602.15) giving notice that "the Government may . . . award other contracts for additional work" and obligating Tempo to "fully cooperate with such other contractors and . . . carefully fit its own work to such as may be directed by the Contracting Officer."

231. By letter dated 25 May 1988, Tempo submitted a claim in the amount of $71,278, which included a claim of $58,324 asserted by its earthwork subcontractor, M.C. Anderson Construction Co., for added costs incurred for maintenance of the dirt road; suspension of use of the road pending dust control measures; manning of ACS's gate for additional hours; and costs of trucks delayed by lock-ins and lock-outs due to closure of the gates (R4, tab 9). The contracting officer denied the claim by written decision dated 30 January 1989 (R4, tab 1). This timely appeal ensued.

DECISION

The Government contends that the dotted line on the drawing showing the last segment of the haul route indicated merely a "permitted route" rather than a road and, thus, the revision of the route did not constitute a constructive change (Gov't. br. 233-34).

The drawings included in the solicitation and the resulting contract did not identify the dotted line section of the route as being merely a "permitted route." During a pre-bid site visit, Tempo found and drove a gravel road in the location shown on

the drawings with the dotted line. In formulating its bid, Tempo was entitled to rely on the haul road shown on the drawing, and verified by a pre-bid site visit. *American Line Builders v. United States*, 26 Cl. Ct. 1155, 1204 (1992). If the Government did not intend that the gravel road should be considered part of the haul route, it should have said so in the solicitation.

The revision of the haul route after award amounted to a constructive change. Tempo is entitled to an equitable adjustment for resulting increased costs, including the costs of watering, widening and regrading the dirt road, which effort would not have been required had it been able to use the gravel road that formed that portion of the haul route upon award of the contract.

SUMMARY

ASBCA NO. 37589

The appeal is sustained to the extent indicated with regard to the claims for: concurrent erection of masonry wythes; textured ceiling paint; mechanical/electrical quality control; and recoupment of liquidated damages. These claims are referred to the parties for negotiation of quantum. The appeal is denied in all other respects.

ASBCA No. 37681

The appeal is sustained to the extent indicated with regard to the claims for: precast plank bearing surface; precast plank camber; and contract completion delays. These claims are referred to the parties for negotiation of quantum. The appeal is denied in all other respects.

Appendix A

ASBCA No. 38576

The appeal is sustained and the matter is referred to the parties for negotiation of quantum.

Dated: 31 March 1995

s/ Peniel Moed
PENIEL MOED
Administrative Judge
Armed Services Board
of Contract Appeals

I *concur*

s/ Mark N. Stempler
MARK N. STEMPLER
Administrative Judge
Acting Chairman
Armed Services Board
of Contract Appeals

I *concur*

s/ Carroll C. Dicus, Jr.
CARROLL C. DICUS, JR.
Administrative Judge
Acting Vice Chairman
Armed Services Board
of Contract Appeals

I certify that the foregoing is a true copy of the Opinion and Decision of the Armed Services Board of Contract Appeals in ASBCA Nos. 37589, 37681 and 38576, Appeals of Tempo, Inc., rendered in conformance with the Board's Charter.

Dated: 5 APR 1995

s/ Edward S. Adamkewicz
EDWARD S. ADAMKEWICZ
Recorder, Armed Services
Board of Contract Appeals

APPENDIX B — OPINION OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT FILED FEBRUARY 6, 1997

NOTE: Pursuant to Fed. Cir. R. 47.6, this disposition is not citable as precedent. It is a public record. The disposition will appear in tables published periodically.

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

95-1429

TEMPO, INC., dba TEMPO WEST, INC.,

Appellant,

v.

Togo D. West, Jr., SECRETARY OF THE ARMY,

Appellee.

JUDGMENT

ON APPEAL from the BOARD OF CONTRACT APPEALS ARMED SERVICES

in CASE NO(S). 37589, 37681 and 38576

This CAUSE having been heard and considered, it is

ORDERED and ADJUDGED:

Per Curiam (ARCHER, *Chief Judge*, PLAGER and RADER, *Circuit Judges*):

Appendix B

AFFIRMED. *See* Fed. Cir. R. 36.

ENTERED BY ORDER OF THE COURT

DATED FEB 06 1997

s/ Jan Horbaly pt
Jan Horbaly, *Clerk*

ISSUED AS A MANDATE: June 12, 1997

APPENDIX C — OPINION OF THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT DENYING PETITION FOR REHEARING FILED JUNE 5, 1997

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

ORDER

A combined petition for rehearing and suggestion for rehearing in banc having been filed by the APPELLANT, and a response thereto having been invited by the court and filed by the APPELLEE, and the petition for rehearing having been referred to the panel that heard the appeal, and thereafter the suggestion for rehearing in banc and response having been referred to the circuit judges who are in regular active service,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the suggestion for rehearing in banc be, and the same hereby is, DECLINED.

The mandate of the court will issue on June 12, 1997.

FOR THE COURT,
JAN HORBALY, CLERK

Dated: June 5, 1997

By s/ Alex Van Veen
Alex Van Veen
Staff Law Clerk

cc: RICHARD D. CORONA
JOHN K. LAPIANA

Appendix C

TEMPO INC V ARMY, 95-1429
(BCA – 37589, 37681)

Note: Pursuant to Fed. Cir. R. 47.6, this order is not citable as precedent. It is a public record.